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PSYCHOLOGICAL ABSTRACTS

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GENERAL

4198. Boda, I. "Perszonalisztika," biológia és lélekstan. ("Personalistics," biology and psychology.) *Magyar Psychologai Szemle*, 1931, 4, 55-81.—There is not sufficient basis—apart from choice and one-sidedness—for setting apart personalistics as an independent science. It is certain that scientific psychology is built up more easily from a biological than from a personalistic basis. Personality is not the final basis of all biological, physiological, bodily and mental phenomena of the human being, but rather the person himself is only one (though very important) mode of manifestation of life, of deep-lying vital force. It is necessary to get back of the person and study life in general.—E. H. Kemp (Clark).

4199. Chevalley, C., & Dandieu, A. Logique hilbertienne et psychologie. (Hilbert's logic and psychology.) *Rev. phil.*, 1932, 57, 99-111.—Math. H. Piéron (Sorbonne).

4200. Dodge, R., & Newton, F. H. J. Corrugated rubber tambour diaphragms. *Science*, 1932, 76, 30.—The authors report a "reasonably satisfactory corrugated rubber membrane" which is much more sensitive to air pressure than a fresh Harvard Apparatus Company diaphragm under usual tension and which is believed to be quite durable. These membranes may be mounted in place of the old rubber membranes, disadvantages of which were generally recognized.—E. H. Kemp (Clark).

4201. Eaton, H. O. The Austrian philosophy of values. Norman: Univ. Oklahoma Press, 1930. Pp. viii + 375. \$3.50.—A detailed exposition of the value theory of Franz Brentano, Alexius von Meinong, and Christian von Ehrenfels. Bibliographies and portraits of these three philosophers are included.—R. R. Willoughby (Clark).

4202. Grijns, G. In memoriam H. Zwaardemaker. *Arch. néerl. de physiol.*, 1931, 16, 1-5.—Announcing the death on September 19, 1930, of H. Zwaardemaker, the well-known Dutch physiologist, at the age of 73 years. A brief sketch of his early training, outstanding contributions to science, and positions held is given.—O. P. Stone (Stanford).

4203. Harms, E. Nikolaj Losskijs intuitionistische Koordination vom energo- und strukturpsychologischen Standpunkte aus betrachtet. (A consideration of Nikolaj Losskij's intuitionistic coordination from the dynamic and structural psychological standpoint.) *Russische Gedanke*, 1931, 2, 170-175.—A treatise discussing the various factors and possible modifications of individual minds. Examples to illustrate the author's points are taken from among

the great philosophers and their modes of thinking and expressing their dispositions.—D. S. Oberlin (Bryn Mawr).

4204. Hess, W. R. Die Methodik der lokalisierten Reizung und Ausschaltung subkortikaler Hirnabschnitte. (The method of localized stimulation and the elimination of sub-cortical extirpation.) Leipzig: Thieme, 1932. Pp. 86. RM. 24.—The author describes a very refined technique for electrical stimulation which can be used as an improvement over surgical methods. He describes the results which he has obtained in the use of this method with cats, and gives numerous schematic illustrations, photographs of apparatus, histological preparations, curves showing current used, individual pictures from films, and an interpretation and evaluation of results.—E. H. Kemp (Clark).

4205. Hudgins, C. V., & Stetson, E. H. A unit for kymograph recording. *Science*, 1932, 76, 59-60.—The device described by the authors is called a pneumodeik, and is intended to replace the old Marey tambour. The essential part of this unit is a "quadruple, corrugated, very thin phosphor-bronze diaphragm, 4 cm. in diameter, such as is used for airplane instruments." Drawings of the device and of a modification which responds to changes in negative pressure are given. Obvious advantages of the unit are mentioned.—E. H. Kemp (Clark).

4206. Irwin, O. C. The organismic hypothesis and differentiation of human behavior. *Psychol. Rev.*, 1932, 39, 387-393.—This is the third article of a series in which the organismic hypothesis has been shown to permeate present thought in the zoological sciences. This article deals with the behavior side of the problem, giving evidence to support the theory that patterns differentiate from a primitive general matrix of behavior called mass activity. There is an individuation of behavior taking place during the uterine and post-natal periods of life. This can be studied in the behavior patterns of grasping, smiling and eating. Studies of this type are being made at the Infant Laboratory of the Iowa Child Welfare Research Station. Differentiation has been found to occur radially outward from the trunk both anteriorly, just as the maturation of the central nervous system proceeds forward and back from the brain stem and cervical region.—A. G. Bills (Chicago).

4207. Johnson, H. M. Some follies of "emancipated" psychology. *Psychol. Rev.*, 1932, 39, 293-323.—The author advances the proposition that psychology, in the process of becoming scientific, has overstepped the canons of Aristotelian logic which demand that, to be valid, an inference must satisfy

all the postulates and operational rules of the system. He argues that psychology is frequently guilty of equivocation in the attempt to generalize its discoveries, by identifying concepts which are defined by different sets of properties or operations. He points by way of evidence to the treatment by psychologists of Thorndike's law regarding learning ability and age, Ebbinghaus's retention curve, Thurstone's absolute zero of test intelligence, Szymansky's trait of "perseverance," etc. There are two courses open to psychology—either frankly to admit that it is governed by unique rules lacking general validity, or to cut down its subject matter by weeding out all that is equivocal.—A. G. Bills (Chicago).

4208. Paulhan, F. *L'homme et sa condition.* (Man and his condition.) *Rev. phil.*, 1932, 57, 1-60.—What differentiates man from animals is not only his clear superiority but a certain inferiority in the constancy of his organization; the author stresses particularly a characteristic which he finds in an essential disequilibrium, an impossibility of obtaining a great and durable harmony of his desires and his ideas, of finding a form satisfactory to his societies. This impossibility results from the ease with which the tendencies of man are dissociated, and with which their elements, ideas, images, and desires may be separated from one another to be reorganized on a new plan.—*Math. H. Piéron* (Sorbonne).

4209. Roback, A. A. Leonard Thompson Troland. *Science*, 1932, 76, 26-27.—A brief biography of Troland with a complete list of his publications.—E. H. Kemp (Clark).

4210. Rossi, G. Il problema della conoscenza. (The problem of knowledge.) *Logos*, 1932, 15, 60-84.—The author sketches the possible ways of proposing and resolving the problem of knowledge, and tries to demonstrate that only a pure gnosiology, founded upon the direct and immediate revelation of consciousness, can sustain realism or the paragon of idealism. The two theories come from experience of the act, but this experience reveals itself to the realist as richer in content than to the idealist; the first finds therein the most complete indication of reality.—R. Calabresi (Rome).

4211. Saudek, R. [Ed.] *Character and personality; a quarterly for psychodiagnostics and allied studies.* Volume 1, No. 1, 1932.—This new journal will appear quarterly, and a British edition will be issued simultaneously in London, also a German edition entitled *Charakter* in Berlin. The American publisher is the Duke University Press, and the subscription is \$3.50 per year.—J. C. Spence (Clark).

4212. Schairer, J. B. *Die Individualpsychologie als Wissenschaft von den aktiven Seelenkräften.* (Individual-psychology as the science of the active psychic forces.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 102-110.—A simple psychological basis is offered for meeting certain current antagonisms toward psychology. These are presented as coming from those interested in theoretical and practical ethics.—O. N. de Weerd (Beloit).

4213. Simonelli, G. Un tipo di contatore degli atti respiratori facilmente costruibile ed utile per esperimenti di lunga durata. (A type of indicator of respiratory functions which can be constructed easily and can be used for long experiments.) *Boll. Soc. Ital. biol. Sper.*, 1931, 6, No. 6.—R. Calabresi (Rome).

4214. Tiffin, J. Phonophotograph apparatus. In *The Vibrato. Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1. Pp. 118-133.—A description of apparatus designed for the purpose of recording the factors of pitch, intensity, and time in singing, speaking and playing. The apparatus consists of two parts: a strobophotograph camera records the pitch by photographing a continuous picture of the stroboscope effect produced by a stroboscope disc illuminated by a light flashing in frequency with the voice; and a vacuum tube voltmeter, connected to an oscillograph, records the intensity of the sound as picked up by a condenser microphone. These two records are photographed on the same film which moves through the camera at a constant speed.—B. Wellman (Iowa).

4215. Vivassa de Regny, P. L'imperativo biologico e la posizione dell'uomo nella classificazione dei viventi. (The biological imperative and the position of man in the classification of living beings.) *Riv. di biol.*, 1931, 309-313.—R. Calabresi (Rome).

4216. Zarewskij, N. Bewusstsein und Zeit. Ein transzendentalphysiological Versuch im Anschluss an Richard Höningwalds "Denkpsychologie." (Consciousness and time. A research in transcedental psychology in connection with Richard Höningwald's *Psychology of Thought*.) Jena: Buchdruck Werkstätte, 1931. Pp. 50.—R. R. Willoughby (Clark).

4217. Zernike, J. A trichromatic colorimeter. *J. Opt. Soc. Amer.*, 1932, 22, 418-421.—The working primaries are homogeneous lights of high intensity, the red primary being produced by a neon lamp with a filter, the green and blue primaries by mercury lamps and appropriate filters. Most colors can be matched by a mixture in some proportion of these three lights; each color is specified by giving the intensities of the lights of known wave length whose mixture will produce it.—D. B. Judd (Bureau of Standards).

[See also abstracts 4232, 4256, 4461.]

SENSATION AND PERCEPTION

4218. Allen, F. The significance of reflex action in colour vision. *Brit. Med. J.*, 1930, No. 3842, 683-684.—The article is a résumé of a paper given before the British Association, ophthalmology section, in Winnipeg, 1930. Afferent influxes arouse characteristic sensations in the cortical centers and, furthermore, arouse certain efferent currents, certain reflexes, which, being conducted to the receptors, either heighten or depress the sensitivity of these receptors. The reason that vision is greatly diminished in weak

illumination is because the retinal sensitivity is lowered. Blue and violet have an extreme sensitizing rôle, and the special sources of the extreme rays lose a great part of their efficacy because of this sensitizing action. Ultra-violet rays are similarly affected. Color blindness is due to an excessive development of the inhibitory actions which affect either one, two, or all three of the fundamental processes, though in certain anomalies of color vision more or less pronounced hypersensitizations are found which bring about the disequilibrium. Allen believes that his conception is able to reconcile the theories of Young and Hering and, furthermore, that facts analogous to those found in dyschromatopsia are to be found in other sensory fields where the same reflex mechanisms function.—*A. B. Hunter* (Clark).

4219. [Anon.] *Enquête sur les effets du cinéma sur la vue.* (An investigation on the effects of the cinema on vision.) *Rev. int. du cinéma éduc.*, 1930, 613-632.—An investigation carried out by the Institut International du Cinéma Educateur, which included 15,874 responses, gave the following conclusions: the bad effects of the cinema on vision, from the ophthalmological and nervous points of view, are not due to cinematography in itself but to the phenomenon of intermittence, to the excessive rapidity with which the films are shown, to the use of worn films and apparatus in poor repair, and to shifts in illumination. Otherwise, there are no bad effects on persons in normal health. The above conditions could be easily remedied by the use of certain technical devices and by systematic control of the apparatus used.—*A. B. Hunter* (Clark).

4220. Belikov, P. N. *Über die Verschmelzung der pulsierenden Töne.* (On the fusion of pulsating sounds.) *J. f. Psychol. u. Neur.*, 1929, 38, 292-300.—Cases of pure interruption cannot be obtained with telephone receivers, since the membrane clicks with the return of the sound. Therefore the question is simply one of periodic weakening of intensity, expressed by the equation $\alpha = \frac{I_{\max} - I_{\min}}{I_{\max}}$. The intensity used was never greater than 10,00 times the threshold. When the frequency of the pulsation increased, there was a fusion, resulting in a sound which at first was uneven but later became continuous and pure. As soon as the sound was definitely continuous, the critical frequency, N , was measured. N did not depend on I after a point 700 or 800 times the threshold. Below this point, N diminished with I , a condition which can be explained by an increase in the relative differential threshold for weak sounds. For average intensity and pitch N was proportional to α . Finally, N varied in direct ratio to the pitch. In extrapolating the curves as a function of α for $\alpha = 1$, Belikov obtained N as a function of pitch for interrupted sounds. Increase in N was not linear, as found by Mayer, but was less rapid. The delicacy of measurement did not permit the calcu-

lution of a formula. (Weinberg and Allen found that $N = k\sqrt{\log f.}$)—*A. B. Hunter* (Clark).

4221. Bergami, G. *Variazioni della resistenza elettrica a varia frequenza del preparato retino-nervo ottico in seguito a stimoli luminosi.* (Variations in resistance, with electric currents of various frequencies, in an optic retino-nerve preparation as a result of light stimulations.) *Arch. di sci. biol.*, 1930, 15, 307-323.—Philippon has proposed a method for measuring the resistance of currents of variable frequencies, stating that the resistance diminishes with the frequency and tends towards an irreducible limit which is the electrolytic resistance of the intracellular liquids, to which is joined at low frequencies a resistance peculiar to the cellular membranes, a structure which can be represented by a serial resistance having a capacity which is shunted by another resistance. The intracellular liquids, being good conductors, would be the armatures of the condenser and the membranes, the dielectric. The excitation is shown in a general way by an increase in the cellular permeability. (For example, Crozier found in *Chromodoris* that a local stimulation facilitated the penetration of acid into the tissues.) Such being the case, the author studied the question how the retinal resistance varies under the action of light. Currents at various frequencies were sent through a varied resistance and through a preparation composed of the retina and the optic nerve of a frog (after Chaffee's method of preparation). Registration was made by a cord galvanometer. Under these conditions light stimulation brought about a definite variation in resistance at a frequency of 800, which became very weak at 100,000 and disappeared at 1,000,000. This fact shows that the electrolytic resistance remains invariable but that the stimulation lowers the resistance of the cellular membranes and therefore increases the permeability, thus creating a reversible variation in the chemical state of the cell.—*A. B. Hunter* (Clark).

4222. Bilancioni, G. *Questioni di oto-rino-laringologia moderna.* (Problems of modern oto-rhino-laryngology.) Pisa: Pacini-Mariotti, 1930. Pp. 514.—This volume contains several lessons, lectures and discussions. Of interest are the one called *L'Orecchio e il Senso dello Spazio* (the ear and the sense of space) and that on *L'Importanza Biologica e Sociale degli Organi di Senso* (the biological and social importance of the sense organs).—*R. Calabresi* (Rome).

4223. Bonain, A. *Vibrations et ondes vibratoires. Membranes et lentilles acoustiques.* (Vibrations and vibratory waves. Membranes and acoustic lenticulae.) *Etude sur les fenêtres labyrinthiques et leur rôle fonctionnel.* (A study on the labyrinthine windows and their functional rôle.) *Arch. int. de laryngol.*, 1930, 709-782; 783-796.—In the first article the author defends his position concerning the physical basis of his theory of audition, which had been recently attacked by Jacques and Crimaud. He affirms again the existence of stationary vibratory waves and the possibility of concentrating the acoustic

waves by means of lenticulae of undetermined dimensions, explaining auditory accommodation by the variation in the curvature of the "gaseous tympanic lenticulae" which would bring about a convergence or a divergence of the waves. Basing his theory on comparative anatomy and pathological data, he resumes in his second article his thesis that the path of entry of sound is through the round window, the oval window with its ossicles serving only as a protecting agent.—*A. B. Hunter* (Clark).

4224. Bos, M. Über echte und unechte audition coloréé. (Concerning genuine and spurious colored hearing.) *Zsch. f. Psychol.*, 1931, 119, 396-406.—This article is concerned with the distinction between real colored hearing and that which is merely the arrangement of hearing and tones in some relation to each other. The author distinguishes three groups, according to the constancy of the tones attached to specific colors. He concludes with a defense of an earlier article on the same subject which was criticized by Anschutz in the *Zeitschrift* in 1930.—*D. S. Oberlin* (Bryn Mawr).

4225. Brown, J. F., & Mize, R. On the effect of field structure on differential sensitivity. (With an experimental investigation of the difference limen for visual velocity and extent in space.) *Psychol. Forsch.*, 1932, 16, 355-372.—In this paper the effect of the sensory field on differential sensitivity is compared with its effect on supraliminal phenomenal values. Theoretically there are three possibilities: (1) the difference limen might be independent of the field structure; (2) the difference limen might vary with the field structure, and in such a way that it would be possible on the basis of previous knowledge of the supraliminal phenomenal values determined by the field structure to predict the values for the difference limen; (3) the difference limen might vary with the field structure, but without any possibility of predicting the values. In the psychophysical literature there are examples for (1) and (2). In the authors' experiments (on differential sensitivity for perceived velocity and perceived length) are examples of (3). On the basis of these results the following conclusions have been drawn: (1) The differential sensitivity is at any rate often a function of the structure of the sensory field. (2) The field structure must be a function of neural processes. (3) It is therefore impossible to determine a generally valid relationship between stimulus and sensation in Fechner's sense. (4) Further progress in psychophysics cannot be expected till more is known of central nervous process. In an appendix the possibility of new critical experiments on the reliability of the j.n.d. (Fechner) as a unit of measurement is discussed.—*J. F. Brown* (Colorado).

4226. Dufour, M., & Donzelot, P. Déformation apparente d'une ligne de mouvement. (Apparent deformation of a moving line.) *C. r. Soc. biol.*, 1932, 109, 1206-1207.—The authors chose to rotate, instead of the involute of Hering's circle, a line composed of joined quarter circles having the same

tangents at the points of junction. This curve has quite a regular appearance in the resting state, which disappears when it is turned; then it seems to show some parts more convex than the neighboring parts, and this appearance is modified with the speed of rotation until it presents the aspect of a polygonal line which turns.—*Math. H. Piéron* (Sorbonne).

4227. Dumas, G. La mimique des aveugles. (Mimicry in the blind.) *Bull. Acad. de med.*, 1932, 107, 607-610.—Résumé of 33 observations made on congenitally blind persons at the National Institution for Blind Children and at the Association Valentin Hany. The author has found that if we ask the blind to mimic strong or weak emotions, delight, great joy, anger or fear, they are incapable of it, and he declares that it is because they do not see, and that mimicry is entirely of visual origin, that is, of social origin. It is a visual imitation of expressions made in the course of time, which for a long time have been adding to the creation of a collective mimetic language. The group has accepted the most visible and most esthetic schemas, and this is the origin of mimicry.—*Math. H. Piéron* (Sorbonne).

4228. Engelhardt, W., & Gehrcke, E. Über die Abhängigkeit der Vokale von der absoluten Tonhöhe. (On the dependence of vowels upon the absolute pitch of sounds.) *Über die Vokalcharaktere einfacher Töne*. (On the vocal characteristics of simple sounds.) *Zsch. f. Psychol.*, 1930, 115, 1-33.—Phonographic discs were played on which were recorded the various vowels in connection with different consonants. Each subject was asked to indicate the vowel which most nearly resembled the sound heard. For the vowels *u* and *o*, the formants (sounds of absolute, fixed pitch for each vowel) played an important part in determining the judgment. Such was not the case for *a*, *e*, and *i*. In a second series of experiments a series of simple sounds was given, produced by an electric oscillator. The subjects had to determine the related vocal sounds. In general the results confirm Köhler's theory on formants and the law of progression by octaves. However, the distribution of judgments was not quite as regular as one might expect, especially for the sounds *a* and *e*. There seemed to be very definite individual differences.—*A. B. Hunter* (Clark).

4229. Erschowitz, N. Untersuchungen des Augenmasses mittels Selbstbeobachtungsversuchen. (An introspective analysis of the ability to perform visual judgment.) *Indus. Psychotechn.*, 1932, 9, 117-124.—How do people use material content in making visual judgments? This is the problem of this study, which the author tried to solve by presenting eleven different judgment tests to one group of 15 and one of 27 adult subjects. The subject's task was to judge angularity, parallelism, horizontality, the surface of differently shaped figures, etc., and then to report how they performed these judgments. Different subjects used different methods. The various tests were judged in three to six different ways. The methods of judging most frequently employed applied the

principle of similarity of elements and Gestalt perception.—*C. Burri* (Chicago).

4230. Freeman, E. Intensity, area, and distance of visual stimulus. *J. Opt. Soc. Amer.*, 1932, 22, 402-407.—Supplementing the work of Piper and Abney on the interdependence of intensity and area in vision, the author investigates the effect of varying the stimulus distance and finds that a slightly different relation holds for near stimuli from that for distant. If A be area of the slit in sq. mm., D the distance in cm., and I the intensity, the following equation represents the experimental results:
 $\log A = 4.89261 - .00076 D - (.39 + .001 D) \log I$. It is suggested that an equation similar to this which holds for dark adaptation might be found for all degrees of adaptation and all intensities of stimulus.—*D. B. Judd* (Bureau of Standards).

4231. Gebhard, M. Goethe und das umgekehrte Spektrum. (Goethe and the reversed spectrum.) *Neue psychol. Stud.*, 1930, 6, 93-99.—If Goethe did not understand the mechanism of Kirschmann's reversed spectrum, he had nevertheless observed the phenomenon as is shown by some charts, to be looked at through a prism, which he published in 1791. The first chart, which had white striae on a black background, gave the spectrum colors in their normal order, while the other one, black striae on a white background, gave the complementary colors (blue, violet, purple, red, and yellow).—*A. B. Hunter* (Clark).

4232. Gergö, E. Az érzéklel fejlődése struktúra és fázia szerint. (The development of sensory experience according to structure and phase.) *Magyar Psychologai Szemle*, 1931, 4, 34-54.—In the development of the functions of mind there are two directions of evolution, which represent two planes of mental life. These two directions lead to complication and deepening. The structural concept of development is concerned with the organization of the content of experience. From this point of view an auditory impression, a word for instance, has as content single vowels and consonants, and is organized from these elements as structural components. As differences of phase the author takes the relations between events according to which the impression of an observed square seems to stand out as an idea, memory object, eventual after-image, eidetic image, hallucinatory idea, or the like. In this direction experiences are not complicated but are deepened.—*E. H. Kemp* (Clark).

4233. Ham, L. B., & Parkinson, J. S. Loudness and intensity relations. *J. Acous. Soc. Amer.*, 1932, 3, 511-534.—Employing three types of sound, warble tones, single frequency tones, and room noise recordings, the authors find that judgments of relative loudness can be expressed "by the equation $mL = a + b e^{xz}$, where mL represents the multiple change in loudness, a and b are constants, and x is the difference in the levels of the sound expressed in decibels." The general equation is said to be a closer approximation than that of Weber-Fechner, and

holds regardless of intensity level or frequency. A graph is also presented which shows the relationship between the relative loudness of sounds and corresponding decibel levels.—*P. E. Huston* (Worcester State Hospital).

4234. Hamilton, W. F., & Freeman, E. Trichromatic functions of the average eye. *J. Opt. Soc. Amer.*, 1932, 22, 369-387.—The amounts of three selected primaries (red, 670; green, 517; blue, 480 m μ) required by 68 observers to match white light and homogeneous light of a number of wave lengths (460, 480, 500, 520, 540, 560, 580, 600, and 620 m μ) have been determined under conditions of adaptation to light for a field subtending an angle of 1° 40'. These results supplement those by Maxwell, Abney, König and Wright, which refer for the most part to dark adaptation, and serve to indicate for the first time the extent of the individual differences, since previous results have involved far fewer observers. The complete results for all 68 observers are given in tabular form in terms of slit-widths required for the match. Contrary to all previous findings, it is reported that a mixture of the red primary with the green primary will match perfectly light of all intervening wave lengths with no loss of saturation. Previously found saturation losses are ascribed to the use of a dark-adapted retina and to the employment of a green working primary other than 517 m μ which had red or blue stimulating capacity. Most of the individual variation is due to variation in receptor sensitivity, but some may be due to variation in macular pigmentation. The frequency distribution is normal rather than bimodal, as has sometimes been supposed from the existence of partially color-blind observers. Hecht's theoretical views are criticized.—*D. B. Judd* (Bureau of Standards).

4235. Juhász, A. Újabb adalékok a perspectiva ismeretéhez. (New contribution to the study of perspective.) *Magyar Psychologai Szemle*, 1931, 4, 17-33.—The author speaks of the work of Katona, who found that the more distant of two objects is not necessarily perceived as the larger of the two, and discusses some work of his own in which he found similar results. His observer, when asked to tell whether or not points of light were equidistant from him, would most often report a greater brightness of the point actually nearer when he considered the points to be equidistant. According to the author, this shows that the perception of the total structure is more important than the factor of distance in the judgment of size and distance.—*E. H. Kemp* (Clark).

4236. Katz, D. Der Aufbau der Farbwelt. (The constitution of the world of color.) (2nd ed. *Die Erscheinungsweisen der Farben*.) Leipzig: Barth, 1930. Pp. 484. 27 RM.—The volume is a resumption of the work done by Katz in 1911, dedicated now to G. E. Müller on the occasion of the latter's eightieth birthday. Like Hering, Katz has studied the perceptions of concrete colors which characterize objects in nature, but he has kept on a psychological basis and has been on his guard against physiological

explanations. Perceptions of surface colors or of colors of transparent objects constitute his world of colors, and the processes which condition the *Erscheinungsweisen*, based on the "material" of sensations, are very different from the processes which condition the realization of this material itself and which should be studied rather under the subject of spectral colors. The most important conception developed in these perception studies is the question of the relative constancy of colors, including the existence of what are called mnemonic colors. This concept arises from the fact that color is linked to an object as one of its characteristic properties, being maintained in spite of changes in conditions modifying the character of the perception and modifying the elementary sensations, as when the color of the light changes. Important data based on this conception are to be found in this study, bearing particularly on the recent theories of Bühler and Gelb.—A. B. Hunter (Clark).

4237. Koffka, K. Beiträge zur Psychologie der Gestalt. (Contributions to Gestalt psychology.) XXIII. Some remarks on the theory of colour constancy. *Psychol. Forsch.*, 1932, 16, 329-354.—Noting with satisfaction the far-reaching theoretical agreement in the field of color constancy reached in the last years, Koffka attempts to formulate some more concrete principles from the accepted general agreement that color and brightness are functions of the organization of the visual field. He distinguishes between the phenomena of contrast and of transformation, including the one under the effects of "difference increase," the other under "shift of level." The concept of neutral level is introduced and the hypothesis formulated that the general color level of the field of vision determined by those parts of the phenomenal field which usurp the color frame work approximates the neutral as closely as possible. The distinction between the two effects is not admitted by Jaensch and his school, and a discussion of the relationship between Koffka's principles and this school is supported by a new experiment with colored shadows. Kroh's results are also discussed. A theory as to the perception of illumination is advanced, and the phenomena of color constancy are discussed in relation to these principles.—J. F. Brown (Colorado).

4238. Lugaro, E. Fisiopatología del dolor. (The physiopathology of pain.) *Riv. pat. nerv. e ment.*, 1930, 36, 105-177.—After an introduction on the general characteristics of nerve functioning, Lugaro discusses the subject of pain. He does not accept the theory of the existence of specific fibers or algetic terminations, though he says that specific thermal sensations furnish algetic impressions of burning by means of their own specific receptor systems. He believes that intense stimuli are able to cross over the threshold of an adjoining central pathway which is the specific pathway of pain, parallel to the pathway of normal sensory conduction. Central hyperalgesia can be explained by accrued excitability of a neurone at the algetic stage. The heterochronism of transmission may be a characteristic of the specific algetic

pathways coming from the periphery. In certain data dealing with visceral pains, the author uses an irradiation phenomenon to explain the question of the cutaneous localization of these pains, with the possibility of reverse irradiations bringing about a visceral hyperalgesia through cutaneous irritation.—A. B. Hunter (Clark).

4239. Lutze, E. Untersuchungen über den absoluten Größeneindruck. (Experiments concerning the impression of absolute size.) *Zsch. f. Psychol.*, 1931, 119, 272-310.—This discusses the bearing of impressions of the absolute size of the first object of a comparison pair on the judgment given, when the pairs are presented tachistoscopically. When the phenomenon of expanding or that of shrinking is abstracted, it is found that the most exact judgments are based on an impression of absolute size. The experiments made use of such varied stimuli as the distances between illuminated lines and circles, and in the experiments dealing with simultaneous presentation of the objects, surfaces, in different positions with respect to one another, were used. Absolute size was found to play a rôle in the judgments concerning the size of the two parts of the Müller-Lyer figure presented successively.—D. S. Oberlin (Bryn Mawr).

4240. Metzger, W. Eine paradoxe Helligkeitsscheinung. (A paradoxical brightness phenomenon.) *Psychol. Forsch.*, 1932, 16, 373-375.—A note reporting and explaining a paradoxical brightness phenomenon in a situation where a large moving shadow passes over a small fixed one. The small shadow brightens up and then fades, but under certain conditions can be made to remain at the same brightness or even darkened. The phenomenon is discussed to show that it cannot be attributed to after-contrast, but is related to phenomena of constancy.—J. F. Brown (Colorado).

4241. Metfessel, M. The vibrato in artistic voices. In *The Vibrato*. Univ. Iowa Stud.: Stud. Psychol. Music, 1932, 1. Pp. 14-117.—The fact that the vibrato is an ingredient of celebrated voices should be regarded as settled. Although all beautiful voices have a vibrato, not all vibratos are beautiful. A vibrato consists of three separate aspects: frequency of vibration, energy and wave form. This study has been chiefly confined to measures of frequency of vibration. The artistic vibrato averages seven pulses per second and a half step in pitch. Subjective analysis destroys its beauty. The vibrato occurs in speech, but the artist uses it with discretion. It has only one salient pitch in perception. A person seemingly hearing in tune his own vibrato may be out of tune to another person, pitch discrimination being equal. About 20% of adults possess an involuntary vibrato. Pre-adolescent boys rarely have a vibrato, but it has been found in the voices of pre-adolescent girls, in one case at six years of age. The children's vibratos are slow, irregular, and narrow in extent, with the rate increasing, regularity becoming more marked, and extent widening as age and

training are increased. The precise neuro-physiological mechanism of the vibrato is yet unknown.—*B. Wellman* (Iowa).

4242. Meyer, M. F. The delusiveness of filtering compound sounds. *Science*, 1932, 76, 54-55.—The author critically and briefly reviews the recent experimentation supporting either side of the old Ohm-Seebeck controversy and concludes that "the cochlea, while being the analyzer, is not a Fourier analyzer." He also warns that electric filters are not "sensation filters."—*E. H. Kemp* (Clark).

4243. Mezes, S. E. Our conscious states picture and apprehend our nervous processes. *J. Phil.*, 1931, 28, 600-607.—Evidence for this hypothesis is found in Holt's contribution *The Concept of Consciousness* in the volume *The New Realism*. When a series of light touch stimuli are given and the rate gradually increased, the distinct forms of succession, rhythm, and density disappear, and the quality of roughness takes their place. Roughness seems to be a blurred and indistinct feeling of the frequency. Parallel evidence is found in audition and vision. Color, pitch, etc., are therefore within the nervous system, though localized in outer space. Such a theory would solve many of the mind-matter problems.—*E. T. Mitchell* (Texas).

4244. Michels, P., & Pikler, J. Ueber die Wirkung des Ohrenverschlusses auf die Stimmtätigkeit bei Gehörlosen. (On the effect of covering the ears on vocal activity in deaf persons.) *Zsch. f. Psychol.*, 1930, 118, 354-367.—When the ears are covered, a person speaks louder than when they are uncovered. Therefore, under these conditions, one has the impression that he must speak louder than usual, and it is necessary to struggle definitely against this tendency in order to keep one's voice at its normal level. Experiments on deaf-mutes who were being taught to speak showed the same objective results found in normal subjects.—*A. B. Hunter* (Clark).

4245. Milian, G. Cécité morphologique. (Form blindness.) *Bull. Acad. de méd.*, 1932, 107, 664-666.—The article deals with a man of 51 years afflicted with syphilis since 1913, who, in February, 1932, has had some slight disorders of vision. It seems that the visual field is diminished on the left side and the pupillary reflexes have for a very long time been abolished on the same side. The oculist declares that there is a lesion, probably of vascular origin, which has injured the posterior optic tracts or the cortical center, but only partially. Suddenly, however, the patient complains of difficulty in recognizing the forms of objects, though seeing perfectly their constituent elements; synthesis is lacking. Since this phenomenon has suddenly occurred in a man who already undoubtedly had a lesion of the cortical visual centers, which means that in the neighborhood of the lesions determining hemiopia a new lesion, which determining agnosia, is produced, the author thinks that there exists a center of visual recognition of form (center of morphological blindness) or

simply some association fibers controlling recognition of form.—*Math. H. Piéron* (Sorbonne).

4246. Müller, G. E. Ueber die Farbenempfindungen. *Psychophysische Untersuchungen*. (On color sensations. *Psychophysical studies*) *Zsch. f. Psychol.*, 1930, No. 1 and 2, Ergänzungsbd., 17 and 18. Pp. 648.—Müller systematizes theoretically a great number of carefully gathered data, the general framework being Hering's theory of vision. The first part of the study is devoted to achromatic stimulations. A stimulation of the cones brings about a development in the extreme outward parts of the three primary sensory processes: P_1 , which is set up by radiations of all the wave lengths, P_{11} , which is set up by waves between 650 and 415 $\mu\mu$, and P_{12} , which is set up by those from 540 $\mu\mu$ to violet at the extreme point of the spectrum. Each of these three processes brings about an excitation of a black-white substance, causes an immediate white valence, and brings about the stimulation of chromatic substances. Müller also discusses the nature of the triple chemical stimulation of the black-white substance and the connection which exists between the nutritive processes and the intensity of the stimulation. One chapter is devoted to the problem of simultaneous contrast, the seat of which is located in the cortex but in a sphere having precedence over the seat of the perceptive processes. He discusses the evolution in time of the achromatic nerve excitations according to the phase of their establishment, consecutive images and modifications in sensitivity, the action of brief stimulations, etc. The second part deals with the chromatic processes and the third with the action of "white" on chromatic stimulations, a complex activity which is both anti-chromatic and prochromatic. In conclusion Müller gives a general, theoretical condensation of the questions involved, insisting on the fundamental idea of antagonism (black-white, red-green, and blue-yellow), which he deals with in a manner somewhat different from that of Hering.—*A. B. Hunter* (Clark).

4247. Pierantoni, L., & Gianni, O. A proposito della diagnosi differenziale fra sordomutismo congenito ed acquisito. (Concerning the differential diagnosis between deaf-mutism by birth and by acquisition.) *Valsalva*, 1930, 1-27.—The authors report a case which, from the clinical data, could be considered innate, but which, on the basis of histopathological examinations, reveals a form of regressive character concerning which it is impossible precisely to determine the origin and the period of manifestation. There is a discussion of the diagnostic difficulties which derive from the present incomplete knowledge of the physiological significance of some of the constitutive elements of the inner ear, and of the fact that the present alterations can repeat their origin in the alterations established in the uterine life, inaccessible to the clinical and histopathological investigation.—*R. Calabresi* (Rome).

4248. Pikler, J. Stimmtätigkeit und Gehör bei unfreiem Munde. (Vocal activity and audition with the mouth closed.) *Zsch. f. Psychol.*, 1930, 118, 1-3;

163-176.—The subject was asked (1) to reproduce a spoken or sung vowel which he had just heard, and (2) to repeat the experiment with his hand held before his mouth without touching his lips. The reproduced sound had the same pitch in both cases, but when the subject removed his hand in the second experiment, it was found that the sound he was making was shriller than the control sound. We are able, therefore, to adapt our vocal effort in two ways for the production of the same sound effect. According to the author, we perceive the respiratory wave itself by means of a general sensitivity, by what he calls "vocal taste" (*Stimmgeschmack*). This same phenomenon is observable when the experiment is performed silently, the vocal effort no longer resulting in the production of sounds. We seem to perceive the vibrating wave in the mouth and in the ear at the same time. Accordingly, Pikler arrives at an explanation of vocal imitation which is somewhat similar to Köhler's explanation. The ear and the larynx are said to form for this purpose a single apparatus, the point of connection being for Pikler a buccal sensitivity for waves sent out by the voice, which serves in turn to regulate the voice. We have a natural ability to compensate for a heard sound by the production of a vocal wave which produces an equivalent effect in the mouth.—A. B. Hunter (Clark).

4249. Podesta, H. Beiträge sur Systematik der Farbenempfindungen. (Contribution to a systematization of chromatic sensations.) *Neue psychol. Stud.*, 1930, 6, 1-92.—Podesta gives a representative schema in the form of a three-dimensional color figure, basing it on observations which always refer to the albedo or to the reflective chroma of objects. This figure, which consists of an oblique double cone with an ellipsoid base, gives a more satisfactory representation of chromatic sensations, according to Piéron, than any model so far proposed.—A. B. Hunter (Clark).

4250. Purdy, D. McL. On chromatic and achromatic colors. *Psychol. Rev.*, 1932, 39, 371-386.—On theoretical and experimental grounds, the author concludes that the distinction between achromatic and chromatic experience is not determined chiefly by retinal factors, but that a stimulus may produce a chromatic process in the retina and yet fail to produce a chromatic process in the psychophysical zone. This is assumed to be possible even though a chromatic effect is transmitted along the optic paths to the cortex. The retinal conditions are therefore inadequate to determine whether a given stimulus shall be sensed as colored or colorless, unless the appropriate central conditions are present.—A. G. Bills (Chicago).

4251. Rademaker, G. G., & Borgansius, F. L. Expériences sur la physiologie de l'ouïe. (Experiments on the physiology of hearing.) *Arch. néerl. de physiol.*, 1931, 16, 346-349.—In a repetition of the experiments of E. G. Wever and C. Bray complete confirmation of the original findings was obtained. Upon introducing a tone into the ear of a cat, an

action current from the auditory nerve was obtained which had the number of phases corresponding to the number of vibrations of the tone.—C. P. Stone (Stanford).

4252. Rinde, C. A. Retinal chromatic fields as a function of wave length. *J. Opt. Soc. Amer.*, 1932, 22, 333-356.—A preliminary determination of the retinal chromatic fields found from the pigmented targets usual in perimetry is reported for 402 right eyes; these results are in good agreement with previous less extensive data by Abney. A device is described which permits the examination of the horizontal meridian with respect to response to homogeneous light; and an attempt, based on 71 eyes, to show with it that the yellow and blue fields and the red and green fields are coextensive failed. This agrees with results by Ferree and Rand contrary to Bull, Hess and Baird, but uncontrolled variables (intensity, saturation, fatigue, speed of target) prevent the drawing of any theoretical conclusion. The variation of the chromatic field limits with the wave length of the stimulus was determined for 10 eyes, and the effect of varying intensity was shown by the use of a didymium glass filter. A curve to represent the results is plotted, showing field size against wave length for the following responses: red, yellow, green, blue, violet. Within the region 480 to 495 m μ , the blue, yellow and green curves all overlap, indicating either a shift from gray in the periphery to blue to yellowish gray to green at the fovea, or a shift from gray to yellow to yellowish gray to green. It is suggested that the five curves drawn may correspond each to a distinct retinal process; but other interpretations, though less directly representative of the data, are possible.—D. B. Judd (Bureau of Standards).

4253. Rosengren, B. Zur Frage der menschlichen Refractions-Kurve. (On the question of the human curve of refraction.) *Acta Ophth.*, 1932, 10, 253-270.—The human curve of refraction is a product of the proper distribution of optical constants as well as of the manner in which these are combined in refraction. Due to the fact of this combination, a normal distribution of the total refraction is not to be expected. The distribution of the total refraction does not permit conclusions as to the existence of different conditions of refraction, and a study of the distribution of optical constants does not make it possible to make direct inferences as to their formation from transmission or environmental factors. Further investigation of the distribution of optical constants would be of interest.—E. H. Kemp (Clark).

4254. Schmeckebl, L. Die Erscheinungsweisen kleinfächiger Farben. (The appearance of color on small surfaces.) *Arch. f. d. ges. Psychol.*, 1932, 85, 1-40.—Between painting and psychological optics there are many points of contact. Particularly close is the relationship in the case of small-surface color. The author attacks this problem systematically, using the six colors of the Ostwald color disk both singly

and in their fifteen paired combinations, viewed at distances varying from 4 meters (initial "colorless" point) to the normal visual distance of 30 cm. Disregarding tone, the colors appeared in three different forms: (1) a shimmer zone when the distance from the eye was greatest; (2) a zone of fluctuation as the eye further approached the stimulus; (3) a zone of constancy, when the interval between the eye and stimulus was smallest. Furthermore, the color appears to vary in tone according to the specific conditions. This applies to both single and paired colors. This "polyvalence" plays an important rôle in painting technique. The shimmer and fluctuation phenomena are utilized in painting to convey an impression of movement. In viewing paintings it is therefore important to vary the distance between the presentation and the eye. Particular reference is made to the paintings of Wölflin. Color charts and an extensive bibliography are appended.—*J. L. Jervis* (Yale).

4255. Schumann, F. Die sinnlichen Phänomene des Wachsens und Schrumpfens. (The sensory phenomena of stretching and shrinking.) *Zsch. f. Psychol.*, 1931, 119, 257-271.—The author discusses the relationship between judgments of "greater" and "smaller," and the phenomena of stretching and shrinking as they appear in stroboscopic experiments. Various stimuli were used to determine the nature of this apparent stretching and shrinking. The use of the Müller-Lyer figure showed an apparent movement of the wings, when presented stroboscopically, without any change in size. The author concludes that the phenomena of stretching and shrinking form a foundation for judgments of objects becoming greater and smaller.—*D. S. Oberlin* (Bryn Mawr).

4256. Thovert, J. Photométrie physique. (Physical photometry.) *J. de physique*, 1930, Series 7, 1, 121-125.—Thovert says that an interest in physiological studies should not be governed by the possibility of expressing the results by means of objectively defined units. A comparison of individual qualities, in so far as the response to light stimulations is concerned, can always be the object of numerous and interesting experiments from the physiological point of view. But it seems logically useless and difficult in practice to maintain a liaison between the results of these studies and the size of the units serving to measure the qualities of light flow.—*A. B. Hunter* (Clark).

4257. Tucker, W. S. The localization of sound. *Proc. Roy. Soc. Med.*, 1929, 22, 1466-1468.—In audition an image is localized spatially on a circle having a binauricular diameter which is larger or smaller than the subject's head, according to individual differences. In connection with this lateral localization by the binauricular mechanism, the author discusses the question of intensity differences for high pitches or for the high harmonics of lower sounds, the question of phase differences for tones below 800 d. v. (that is, for the usual register of the conversational voice), and the question of the differences in time

intervals of the noises concerned. In conclusion he speaks of certain military methods of localizing sounds with amplifying devices by means of intensity differences.—*A. B. Hunter* (Clark).

4258. Weidlich, K. Farben und Farben-Empfindung. (Color and color sensation.) *Stettin: Saran*, 1930. Pp. 31.—*R. R. Willoughby* (Clark).

4259. Weissenborn, F. August Kirschmanns schiefer Farbenkegel verglichen mit einigen vorher und nachher entstandenen Farbensystemen. (August Kirschmann's oblique color cone compared with certain previous and more recent color systems.) *Neue psychol. Stud.*, 1930, 6, 101-118.—In 1895 Kirschmann published an article in the *American Journal of Psychology*, giving an oblique, double cone as his conception of the color system. This article was little known in Germany until its translation in 1927. Weissenborn gives an extract of Kirschmann's original article and compares his color cone with those of the mathematician J. H. Lambert of Berlin (1772), the astronomer Mayer of Göttingen (1758), the painter Runge of Hamburg (1810), the chemist Chevreul of Paris (1861), the psychophysicists Wundt (1863) and Hering (1915), and the physicists Ostwald (1916) and R. Luther of Dresden (1927).—*A. B. Hunter* (Clark).

4260. Zürmühl, G. Abhängigkeit der Tonhöhenempfindung von der Lautstärke und ihre Beziehung zur Helmholtzschen Resonanztheorie des Hörens. (Dependence of the sensation of tonal pitch on sound intensity and its relation to Helmholtz's resonance theory of audition.) *Zsch. f. Sinnesphysiol.*, 1930, 61, 40-86.—The subjects were required to compare with a standard sound of given frequency and of rather weak intensity another sound of increasing intensity, the frequency of which could be modified by the subject to a point where the second sound seemed identical in tonal pitch with the first sound. The author found for the 29 subjects tested a noticeable lowering of the intensified sound. However, the individual ratios were very unequal, diminishing when the frequency of the standard tone was raised. With an intensity ratio of 1 to 9 there was an average lowering of pitch of 2.5% for 128 d.v., 4% for 192, 3.5% for 256, 2.5% for 435, 2% for 768, 1.5% for 1280, and 1% for 3072 d.v. (The fact that Stumpf observed tonal elevations with increased intensity may be the result of a psychological identification of the strong and the high, the weak and the low.) This lowering in tonal pitch has been very generally observed and has been found to be even greater in amount by Broca, Burton, and Ewald. Ewald cites the phenomenon as being contrary to Helmholtz's theory of audition, but the author takes the opposite view. If the frequency of pendulums and diapasons decreases with the increasing amplitude of their oscillations, in so far as those parts are concerned to which, according to Helmholtz, one must compare the special resonators of the ear, their individual frequency is raised with the amplitude. Therefore the result must be a lowering in pitch of the per-

ceived sound, for a sound of determined frequency will set into action (when it becomes more intense) a resonator corresponding to a lower tone having a smaller vibration amplitude.—*A. B. Hunter* (Clark). [See also abstracts 4217, 4325, 4332, 4334, 4449, 4483, 4512, 4514.]

ATTENTION, MEMORY AND THOUGHT

4261. Desbiens, M. *Le symbolisme verbal et l'exercice de la pensée.* (Verbal symbolism and the exercise of thought.) *Rev. phil.*, 1932, 57, 432-463.—Thought, says the author, is sometimes independent of language and even of imagination. He first defines symbolism and tells in what way it concerns language, and how symbolism, once established, influences thought and conditions the exercise of it. He then makes an examination of internal language and its relation to intuition and touches upon externalized language and its dependence with respect to thought. He derives from his ideas the following statements: there is a sort of chronaxy between thought and language; consciousness adopts at its different levels various rhythms, of which discursive intelligence prefers the slowest. Language determines thought, symbolic material acts upon creative intelligence, not at all because the word has an influence upon the idea but because the expressive net-work measures inadequately the intelligible content and obliges the resumption of explanation, and the author admits the existence of a conscious understanding which may be momentarily set free from language and even from all representation.—*Math. H. Piron* (Sorbonne).

4262. Hennig, R. *Selbstbeobachtungen über eigenartige Ideenassoziationen.* (Introspections concerning some singular associations of ideas.) *Zsch. f. Psychol.*, 1931, 119, 372-383.—The author has made a record of peculiar associations which have taken place over a number of decades. Many of these occur in half-waking states and are concerned with old memories. Dates, especially, bring to mind many unusual associations. He also reports the fact that musical selections bring in their train many associations, which is less unusual than some of his other reports.—*D. S. Oberlin* (Bryn Mawr).

4263. McGeoch, J. A. *Forgetting and the law of disuse.* *Psychol. Rev.*, 1932, 39, 352-370.—The thesis is advanced that the law of disuse cannot account for the major phenomena of forgetting; first, because it lacks generality, since disuse often fails to produce forgetting; second, because even where forgetting and disuse are correlated, there is no evidence that it was the disuse that caused the forgetting, instead of other important factors which were present; third, because the principle of passive decay has no analogue anywhere else in science, and is illogical; and fourth, that experimental work with retroactive inhibition shows that forgetting varies with interpolated conditions rather than with disuse. Two principles are offered to account for forgetting: interpolated activities and altered stimulating conditions. Disuse is important only in that it gives these

primary laws an opportunity to operate.—*A. G. Bills* (Chicago).

4264. Thorndike, E. L. *The fundamentals of learning.* New York: Bureau of Publications, Teachers College, 1932. Pp. xvii + 638.—The author reports extensive experiments conducted by himself and his associates and designed to throw light upon the laws of learning. As a result he takes the position that "belongingness" and "satisfyingness" are the most important principles; that repetition without belonging has approximately zero effect; that annoyingness in itself has slight effect, its apparent effects being usually due to the fact that it may force a change in the line of approach to the problem. Chapters are included on impressiveness, distribution, polarity, omission of intermediate terms, readiness, identifiability and availability, the influence of mental systems (association experiments), desires, purposes, interests, and motives, the conditional reflex, etc. A chapter at the end summarizes the alleged adverse evidence and comments upon it from the connectionist viewpoint. Ten appendices, in addition to 153 text tables, present a large sampling of the data upon which the conclusions rest. Bibliography of 105 items.—*R. R. Willoughby* (Clark).

4265. Wolff, W. *Selbstbeurteilung und Fremdbeurteilung im wissenschaftlichen und unwissenschaftlichen Versuch. Physiognomische Untersuchungen an der Stimme, am Profil, den Händen und einer freien Nacherzählung.* (Evaluations of self and others performed both wittingly and unwittingly by the subjects. Physiognomic investigations of voice, hands, profile, and repetition of a story.) *Psychol. Forsch.*, 1932, 16, 251-328.—In a statistical investigation 55 subjects were required to estimate the character of individuals from their voices heard in phonographic record. These voices often included their own. It was found much harder to recognize one's own voice than that of acquaintances. Even when unrecognized, however, the evaluation of one's own voice was always characteristically different. Except in the cases of individuals with decided inferiority complexes, where it was exceptionally prejudiced, it was always very favorable. The judgment was found to be less superficial and much lengthier when dealing with one's own voice. Estimations given unwittingly were essentially the same as those given with full knowledge. Similar experiments with profile, hands, and free narration of a story showed similar results.—*J. F. Brown* (Colorado).

[See also abstracts 4404, 4520.]

NERVOUS SYSTEM

4266. Audiat, J., & Fessard, A. *Effet des radiations ultra-violettes sur l'activité fonctionnelle du nerf.* (Effect of ultra-violet radiations on the functional activity of the nerve.) *Rev. d'actinol. et de physiotherap.*, 1932, 8, 7-23.—Under the influence of epidermic radiation there is a direct action on the extremities of nerve fibers reached by the radiation.

This action manifests itself by a diminution of excitability reaching even to total inexcitability, the modifications produced being reversible. The phenomena of hyperesthesia following analgesia which result from powerful epidermic irradiations may be interpreted as reflecting subjectively the results obtained by the authors on the isolated nerve.—*Math. H. Piéron* (Sorbonne).

4267. Himwich, H. E., & Nahum, L. H. The respiratory quotient of the brain. *Amer. J. Physiol.*, 1932, 101, 446-453.—The respiratory quotient of the brain of 14 dogs was determined by the analysis of the blood for CO₂ and O₂. The average of 38 respiratory quotients obtained was 1.00 ± 0.006 . In four anesthetized animals the respiratory quotient was not changed by insulin or pituitrin, although it was by adrenalin and pitressin. Carbohydrate is constantly oxidized in the brain of the living animal. Since the respiratory quotient remains unity after pancreatectomy, carbohydrate is not utilized in the form of glucose.—*C. Landis* (N. Y. Psychiatric Institute).

4268. Lhermitte, J., & Trelles, J. O. Physiologie et physiopathologie du corps strié et des formations sous-thalamiques. (Physiology and physiopathology of the corpus striatum and of the sub-thalamic formations.) *Encéph.*, 1932, 27, 235-271.—A general and critical review, followed by a bibliography of about 80 works and by one figure.—*Math. H. Piéron* (Sorbonne).

4269. Noica, D. Perte des mouvements de dextérité dans un cas de lésion du lobe pariéto-occipital gauche. (Loss of skilled movements in a case of lesion of the left parieto-occipital lobe.) *Encéph.*, 1932, 27, 27-34.—Account of the observation of a young engineer-officer with a serious injury in the left occipito-parieto-temporal lobe, due to a large abscess under the scalp. Operation revealed a collection of pus between the dura mater and the cranium and extending a centimeter down into the cerebral mass. After recovery from the operation, neurological examination showed that there were no disturbances of the pyramidal system. The dynamometric force of the right side was 50, of the left 0. The tendinous reflexes were equal. There were some slight disturbances of sensibility of the right side; tactile sensitivity was diminished in the upper right member, half the chest, and half the abdomen. The vibratory sense was diminished in the bones of the right hand; the joint sense was affected there but not abolished. In the lower member, there was no trouble of either superficial or deep sensitivity. The patient exhibits verbal deafness and verbal amnesia; he has troubles characteristic of the sensory aphasia of Wernicke. The patient has retained all voluntary movements and the strength for their execution, but he shows difficulties in their execution which seem to resemble the symptoms described by Babinski in cerebellar affections. But after a more thorough examination it may be said that the patient has lost skilled movements which he had learned under the control of vision but that, at present, he is

capable of relearning them. This proves that the same disturbances in patients not having cerebellar lesion disappear after exercise, but that they persist as long as the lesion lasts in those who have cerebellar lesion. The cerebellar patients are not able to make the movements through loss of the function of fixity; the non-cerebellar because they have forgotten the movements which they have learned.—*Math. H. Piéron* (Sorbonne).

4270. Ranson, S. W., Muir, J. C., & Zeiss, F. R. Extensor tonus after spinal-cord lesions in the cat. *J. Comp. Neur.*, 1932, 54, 13-33.—Hypertonus of the extensor muscles of the homolateral limbs appeared in cats in which the cortico-spinal and rubro-spinal tracts were cut by sectioning the dorsal part of the lateral funiculus at the level of the first cervical segment. Evidence, substantial but by no means conclusive, indicates that the tone-inhibiting impulses reach the cord via the cortico-spinal rather than the rubro-spinal tract. Great weakness of the homolateral limbs followed lesions in the ventral funiculus including the direct vestibulo-spinal tract. Combined lesions of the lateral and ventral funiculi caused weakness of the homolateral limbs, but if the cats were given body support in a hammock, the homolateral limbs were held extended and offered resistance to passive flexion. Within a fortnight the hypotonus resulting from lesions in the lateral funiculus largely disappears, but the weakness following lesions in the ventral funiculus is still very evident after two weeks; yet it decreases gradually with time.—*C. P. Stone* (Stanford).

4271. Ranson, S. W. Rigidity caused by pyramidal lesions in the cat. *J. Comp. Neur.*, 1932, 55, 91-97.—After an extensive lesion in the pyramid of the medulla oblongata the cat is still able to use the four limbs in walking, and displays only a slight impairment of function. This slight impairment is indicated by awkwardness in the use of the contralateral limbs and occasional stepping on the dorsum of these feet. Extensor rigidity is found only under special experimental conditions such as supporting the cat in a hammock with legs pendant or putting it on its back in a trough. It is not apparent when the cat is bearing its own weight.—*C. P. Stone* (Stanford).

[See also abstracts 4204, 4307, 4325, 4326, 4332, 4334, 4505.]

MOTOR PHENOMENA AND ACTION

4272. Anokhin, P. K. [Correlation between excitation and inhibition by their simultaneous occurrence in the cerebral cortex.] *Trudi fisiol. lab. Akad. I. P. Pavlova*, 1932, 4, 322-339.—Complete differentiation was first established for a metronome. In the experiments which followed, the inhibitive metronome was put in action alone for 20 sec., and then, without cessation of this metronome, different positive conditioned stimuli were introduced in addition, acting for 20 sec. together with the metronome, and then the positive stimulus was withdrawn, leav-

ing the metronome in action alone for 29 sec. more. This combination was not reinforced with food. First trials of a positive reflex in combination with the negative one gave the separate action of processes of excitation and inhibition. The positive reflex was often not only not diminished, but was often increased as a result of positive induction. If this combination of positive and negative stimuli was not reinforced with food, then the size of the positive reflex gradually diminished and became zero. When the combination of the negative metronome with one positive stimulus had reduced the positive response to zero, then a different positive stimulus applied in this combination gave at the very beginning a diminished effect. If the author changed this combination of positive and negative stimuli and gave food without cessation of positive stimulation, then the positive stimulus soon (after 3 or 4 trials) reestablished its positive action and gave the normal effect. It is interesting that together with strengthening of the positive stimulus there is also a strengthening and concentration of the negative stimulus. Successive inhibition is observed after the combination of negative and positive reflexes, not reinforced with food. After reinforced combination the process of positive induction preponderates.—*P. K. Anokhin* (Medical Institute, Nijny Novgorod).

4273. *Anokhin, P. K.* [Hypnotic stages in the normal balance between excitation and inhibition during formation and establishment of differential inhibition.] *Trudi fiziol. lab. Akad. I. P. Pavlova*, 1932, 4, 339-349.—The author tried conditioned reflexes at different intervals after application of difficult differentiation of frequency of tactile stimulation. At the very beginning of establishment of differentiation the phase of subsequent equalization can be discovered. When differentiation and consequently inhibition become complete there is a paradoxical phase. In the course of further application of differentiation, inhibition concentrates more and more and the paradoxical phase becomes more closely limited to the moment of the application of differentiation. At first this state was observed after 10 min., then after 4 min., then 1 min., and at last it was impossible to discover it at all.—*P. K. Anokhin* (Medical Institute, Nijny Novgorod).

4274. *Arnstein, E.* Das Problem der Linkshändigkeit. (The problem of left-handedness.) *Ped. rosh-leddy*, 1931, 10, 449-455; 520-525.—A review of investigations conducted in Palestine. 11.07% of left-handedness was found in 2256 children, with a slightly higher percentage among the Jews than among the Orientals. Special attention was paid to the problem of the relation of left-handedness to speech defects.—*E. H. Kemp* (Clark).

4275. *Arslan, K.* Fenomeni di compenso labirintico. (Phenomena of labyrinthine compensation.) *Valsalva*, 1929, 1-7.—The report of a clinical observation of an individual who had lost the use of an inner ear following an inflammation of the destructive type. The author reports the results of pra-

tical researches during the period of the presentation, and of the development of vestibular compensations. He also gives a diagram of the times of the vestibular reactions of which an exact chronographic measure can be taken.—*R. Calabresi* (Rome).

4276. *Atzeni Tedesco, P.* La capacità vitale delle donne cagliaritane in rapporto all'habitus. (The lung capacity of Cagliari women in relation to body form.) *Atti della soc. fra i cultori delle sci. e nat. in Cagliari*, 1931, No. 4.—The average lung capacity in the Cagliari woman is 2439, much lower than that of the man. The values of lung capacity show small variability: they vary slightly with weight, height, thorax volume, and a little less with body surface. It appears that the values are lowest in those of the pyknic type and highest in those of the athletic, but very little higher than in those of the asthenic type. Concerning the morphology of the thorax, it is found that the values are higher for those of the asthenic type; this confirms the theory of the influence of the conformation of the thorax and the action of the diaphragm on lung capacity.—*R. Calabresi* (Rome).

4277. *Atzeni Tedesco, P.* Le costituzioni morfologiche dei Cagliaritani durante l'accrescimento dai 12 ai 19 anni. (The morphological constitution of the Cagliarians during growth from 12 to 19 years.) *Endocrinol. e patol. costitut.*, 1931, 7, 403-520.—The author established arithmetic means of several biometrical data on the population of Cagliari between the ages of 12 and 19, studying 150 healthy subjects for each age. He found also the degrees of excess and deficit according to Viola's method, and the relation of the anthropometric data for each age to those of the average adult male of the same population. He found proportions of pyknics, normotypes, leptosomes, and mixed types which were very near to those observed in adults. He determined the growth curve for each segment of the body considered in particular, and calculated for each constitutional type several indices of constitution, nutrition, strength, etc.—*R. Calabresi* (Rome).

4278. *Atzeni Tedesco, P.* L'uomo medio Cagliaritano metricamente determinato sopra 300 individui. (The average man of Cagliari, determined metrically from 300 individuals.) *Endocrinol. e patol. costitut.*, 1931, 6, 1-21.—*R. Calabresi* (Rome).

4279. *Bachrach, M., & Morin, G.* Un nouveau réflexe acquis (conditionnel) de la vie végétative. (A new acquired (conditioned) reflex of the vegetative life.) *C. r. Acad. sci.*, 1932, 194, 746.—The authors built up a conditioned reflex of defecation in a young cat. They took as unconditioned stimulus an enema with lukewarm water, and as a conditioned stimulus a musical sound, always the same (*mi* of the fourth octave given by a reed pipe). The emission of sound coincided with the penetration of the enema into the rectum and was prolonged throughout the administration of water. The conditioned reflex thus obtained is fragile and rapidly disappears.—*Math. H. Piéron* (Sorbonne).

4280. Bonnardel, R., & Liberson, W. Recherches sur la physiologie du travail humain aux hautes altitudes. (Researches on the physiology of human work in high altitudes.) *C. r. Acad. sci.*, 1932, 194, 1265-1267.—An account of comparative experiments conducted at Paris and at the scientific institute at the Jungfraujoch (3457 meters altitude). Reproducing the experiments of Dürig on reaction time, the authors did not find any systematic modification, as Dürig did, whether the reaction times were auditory or visual. The authors sought to find whether the particular state of mental fatigue which is experienced during a sojourn at high altitudes would be shown in the psychomotor functions put into play in the study of reaction times. They have found that this particular fatigue at high altitude has nothing to do with the psychomotor functions.—*Math. H. Piéron* (Sorbonne).

4281. Brandi, C. L'ampiezza respiratoria in rapporto all'età, alla statura, al perimetro toracico, e all'indice di robustezza. Suo valore nella valutazione fisica. (Respiratory amplitude in relation to age, height, thoracic perimeter, and the index of strength.) *Riv. di sci. appl. all'educ.*, 1932, 3, 96-106.—The author observed 140 subjects between the ages of 19 and 26, and found that the anthropometric measurements which he took into consideration were not proportional to age. Respiratory amplitude grows proportionally with size, while the thoracic perimeter, which agrees with Piquet's index, is independent of size and respiratory amplitude. Respiratory amplitude is determined by the phase of expiration more than by inspiration. On the basis of his observations the author concludes that a good respiratory amplitude is witness of a good physical constitution.—*R. Calabresi* (Rome).

4282. Chuchmarev, Z. [The psychogalvanic method and the study of labor.] *Ukrain. psichoneurolog. instit.*, 1930, 11, 309-335.—By the use of the psychogalvanic method the following conclusions were drawn: The voltage is proportional to the tension of the neurophysical tonus of the organism at a given moment. There is also an influence upon the tonus, affected by the individual's reaction to his surroundings.—*A. Yarmolenko* (Leningrad).

4283. Olivio, G. Le reazioni vestibolari nei feriti cranici. (Vestibular reactions in patients with head injuries.) *Riv. sper. di fren.*, 1932, 54, 1-11.—*R. Calabresi* (Rome).

4284. Davis, H., & Davis, P. A. Fatigue in skeletal muscle in relation to the frequency of stimulation. *Amer. J. Physiol.*, 1932, 101, 330-356.—When a nerve-muscle preparation of a cat is stimulated for 2 or 3 minutes the tension developed by the muscle falls from its initial value to a lower level, which is then maintained with little or no further change for many minutes. The tension maintained after 3 minutes is partially a function of the frequency of stimulation. A muscle brought to low "fatigue level" by continued stimulation at high frequency will partially recover if stimulated at a slower rate. On re-

turn to a more rapid rate there is usually a transient further increase in tension, indicating that the muscle has partially recovered even while exerting greater tension. Cessation of stimulation for half a second in a fatigued muscle results in a considerable but transient increase in both tension and action current when stimulation is resumed. The hypothesis is offered that under normal conditions the action current or process underlying it determines quantitatively the amount of energy made available for the development of tension. The tension exerted by a fatigued muscle at a given frequency of stimulation is thus a resultant of the "equilibration level" of the conducting mechanism and the rate of relaxation of the individual twitches.—*C. Landis* (N. Y. Psychiatric Institute).

4285. De Jongh, S. E., & Laqueur, E. Wirkung des Hypophysenvorderlappenhormons auf die Genitalia bei senilen männlichen Tieren. (Action of the anterior-lobe, hypophyseal hormone on the genitalia of senile male animals.) *Arch. néerl. de physiol.*, 1931, 16, 84-90.—Through injections of hormone produced from the anterior lobe of the hypophysis and also that recovered from the urine of women in the early stages of pregnancy, the testes of old male rats were reactivated. The testes became larger, the interstitial cells more numerous, and the seminal vesicles distended. (5 experimental animals; 5 controls, which received injections of NaCl.) Without venturing a conclusion, the authors discuss the question whether sexual senility results primarily from alterations in the action of the anterior lobe of the hypophysis or whether it is the result of testicular failure with respect to hormonal output.—*C. P. Stone* (Stanford).

4286. De Juan, P. Quelques autres observations sur des réflexes oculaires provoqués par l'aspiration et la compression pneumatiques du contenu des canaux semi-circulaires verticaux, antérieurs et postérieurs chez le lapin. (Additional observations on the ocular reflexes caused by pneumatic aspiration and compression of the contents of the vertical, anterior, and posterior semi-circular canals.) *Trav. lab. de rech. biol. de l'Université de Madrid*, 1930, 26, 155-162.—From the results of work done in 1927-1928, De Juan has already observed that the Ewald law (an ampullipetal current by pressure and an ampullifugal one by aspiration) is only partly true in a fistula of the canals. It is valid when the labyrinth operated upon is situated above the fistula, whereupon the ampullipetal current causes a very intense nystagmus. When the labyrinth is below, however, the ampullifugal current is the more active. Moreover, contrary to current opinion, the nystagmus plane does not coincide with that of the stimulated canal. Thus the purest case of horizontal nystagmus was obtained through pressure on the left vertical posterior canal. Moreover, nystagmus was not produced exactly in the same plane for the ampullifugal and ampullipetal currents. There was only a slight difference for the horizontal canal, but for the vertical canal the one current gave a vertical nystagmus.

and the other a horizontal nystagmus. Nystagmus was more intense for the horizontal canal than for the anterior, vertical one. All the data show the complexity of the reaction and the conspicuous differences obtainable in the action of the three kinds of canals.—*A. B. Hunter* (Clark).

4287. Denisenko, M. M. [The vaso-constrictor blood properties and fatigue.] *Ukrain. psichonevrol. instit.*, 1930, 11, 161-178.—The principal problem was to study experimentally the changes of contraction of blood vessels under the influence of blood sera from normal and fatigued animals. It was found that blood serum and hemolyzed whole blood had a greater vaso-constrictor power than blood and blood serum of the normal animal.—*A. Yarmolenko* (Leningrad).

4288. Dragănescu, S., Kreindler, A., & Bruch, A. Les réflexes vestibulo-végétatifs en pathologie nerveuse. (The vestibulo-vegetative reflexes in nerve pathology.) *C. r. Soc. biol.*, 1932, 120, 784-786.—The irrigation of the ear with water at 26° brings about in the normal person a diminution of the pulse and various capillary changes. The authors have studied the changes in these vestibulo-vegetative reflexes in the case of diseases of the nervous system.—*Math. H. Piéron* (Sorbonne).

4289. Dragănescu, S., Kreindler, A., & Bruch, A. Sur la mécanisme physio-pathologique des réflexes vestibulo-végétatifs. (On the physio-pathological mechanism of vestibulo-vegetative reflexes.) *C. r. Soc. biol.*, 1932, 120, 786-787.—The authors think that the efferent influx of the vestibulo-vegetative reflexes is propagated at the same time over the vagal and sympathetic routes. The reflex does not depend as a physiological mechanism upon the phenomenon of primary abdominal vaso-dilation, but acts as a direct reflex on the peripheral vaso-motors. For it to be produced, there must exist a certain equilibrium between the excitabilities of the two systems, sympathetic and para-sympathetic.—*Math. H. Piéron* (Sorbonne).

4290. Durig, A. Über die physiologischen Grundlagen der Atemübungen. (The physiological basis of breathing exercises.) Vienna: Springer, 1931. Pp. 31.—*R. B. Willoughby* (Clark).

4291. Fischer, M. H. Messende Untersuchungen über die Gegenrollung der Augen und die Lokalisation der scheinbaren Vertikalen bei seitlicher Neigung des Gesamtkörpers bis zu 360°. II. Mitteilung. Untersuchungen an Normalen. (Quantitative studies on the compensatory rotation of the eyes and the localization of the apparent vertical for lateral inclination of the entire body up to 360°. II. Studies on normal subjects.) *Messende . . . Neigung des Körpers, Kopfes und Stammes.* III. Mitteilung. Untersuchungen an einem Erstaunten mit Funktionsuntüchtigkeit beider Vestibularapparate und einem einseitig Labyrinthlosen. (Id., for the lateral inclination of the body, the head, and the trunk. III. Studies on a case of acquired deafness with functional

incapacity of both vestibular apparatuses and a case of unilateral loss of the labyrinth.) *Arch. f. Ophthalmol.*, 1930, 123, 476-508; 509-531.—Having found in his previous experiments (limited to 40° inclinations) a definite influence of the flexion of the subject's neck, Fischer studied in this article the inclination of the entire body so that only the graviceptors might be effective. Compensatory rotation increased at first with inclination of the body, reaching its maximum (usually from 4° to 6°) around 60°, with a subsequent decrease. The apparent vertical was always found to deviate in the direction of the inclination (Aubert's phenomenon), the deviations reaching 45° for inclinations from 100° to 120°. Judgments were very difficult at 150°. When the subject returned to his upright position after having made a judgment, he would then localize the vertical with a slight deviation in the direction of the preceding localization (a phenomenon of consecutive effect). From the experiments no causal relation was found to exist between the two phenomena of localization and compensatory rotation, the curves bearing no relation to each other. The former is a more complex and more central phenomenon than the latter. In the second group of studies, Fischer obtained, for the subject with bilateral loss of the vestibular apparatus, an eye rotation due to the neck reflex when the head or the trunk only was inclined. When, however, the entire body was inclined, only a very slight rotation resulted. Accordingly, the compensatory rotation may be related to a purely labyrinthine reflex, any other graviceptor being practically excluded. The second subject exhibited, when his entire body was inclined, a rotation of 3° at the maximum, which was not compensatory, however, but was in the direction of the body inclination. The localization of the apparent vertical by the first subject was irregular and was not essentially different from that of normal subjects. The second subject gave reversed judgments, in cases of head inclination, that is, the inclination of the line judged vertical was opposite to that of the head.—*A. B. Hunter* (Clark).

4292. Friedmann, A. Schematische Darstellung des Anteils der Linkshändigkeit an der Entfaltung von Charakterzügen und Fähigkeiten. (Schematic presentation of the relations between left-handedness and the development of character traits and abilities.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, opp. p. 60.—The various physical and social influences and consequent developments in social attitudes and abilities and failures to achieve are all assigned convenient places on a chart. By means of arrows with heavy, light, and dotted shafts the direction and the assumed degree of influences are indicated.—*O. N. de Weerd* (Beloit).

4293. Hellebrandt, F. A. Studies on albuminuria following exercise. I. Its incidence in women and its relationship to the negative phase in pulse pressure. *Amer. J. Physiol.*, 1932, 101, 357-364.—The incidence of albuminuria increased from 14.8% before exercise to 57.5% after exercise. The pulse pressure fell below normal in all cases after a half-

hour of exercise. The results are explained by the hypothesis that strenuous exercise shunts the blood to the working muscles and the skin, affecting the circulation of the kidney in such a way as to cause asphyxiation of the renal cells beyond that necessary for normal function, thus allowing the appearance of albumen in the urine.—*C. Landis* (N. Y. Psychiatric Institute).

4294. Hellebrandt, F. A., Brogdon, E., & Kelso, L. E. A. Studies of albuminuria following exercise. II. Its relation to the speed of doing work. *Amer. J. Physiol.*, 1932, 101, 365-375.—“Two types of post-exercise albuminuria exist. In addition to that occurring a relatively long time after the cessation of moderate, prolonged and steady exercise, another appears during long bouts of rapid and exhausting work or shortly after the termination of brief violent exercises of speed. The albuminuria occurring during exercise or shortly after its cessation is unrelated to the concomitant variation of pulse pressure, but bears an etiological relation to the speed of doing work, occurring only after violent or rapid muscular exertion.” The findings are explained by the hypothesis that exercise of speed brings about a general systemic increase in acidity, which alters the permeability of the renal tissue to the blood proteins, in consequence of which albumin appears in the urine.—*C. Landis* (N. Y. Psychiatric Institute).

4295. Hense, H. Die Augendiagnose und Gesichtsausdruckskunde. (Ocular diagnosis and the art of facial expression.) Hüls b. Krefeld: Thorraduranwerk, 1931. Pp. 75.—*R. R. Willoughby* (Clark).

4296. Heringa, G. C. Seizième journée de physiologie. (The sixteenth physiology meeting.) *Arch. néerl. de physiol.*, 1931, 16, 251-303.—Brief abstracts of papers read on December 14, 1930, in the new laboratory of physiology, Kroeselaan, Utrecht, Holland, as reported by the secretary. The following titles may be of interest to psychologists: E. Laqueur et al.: Definition of the male hormone. Is it a single or a multiple hormone? A. deKleyn and V. Schenk: The reflex arc of labyrinthine nystagmus in man. S. E. deJongh and E. Dingemanse: Curbing of rut (in animals). Following each abstract is a brief résumé of the discussion which followed reading of the paper. Abstracts in French.—*C. P. Stone* (Stanford).

4297. Konorski, J., & Miller, S. Méthode d'examen de l'analyseur moteur par les réactions salivo-motrices. (Method of examination of the motor analyzer by salivo-motor reactions.) *C. r. Soc. biol.*, 1930, 104, 907-910.—If we reinforce a passive movement of an animal by the presentation of food, we observe, after the formation of a simple conditioned reflex, that this same movement reappears spontaneously in definite intervals of time. If, after the formation of this conditioned reflex of the second type, we cease to reinforce the movement with food, we observe at first the disappearance of

the salivary reflex and later only the movement. But this reflex is not completely abolished. Under the influence of an inhibiting factor, for example a neutral factor, the motor reaction reappears first, while sometimes the salivary reaction may remain completely inhibited.—*Math. H. Piiron* (Sorbonne).

4298. Krisch, H. Die organischen, einschliesslich der exogenen Reaktionstypen. (The organic, including the exogenous, reaction type.) Berlin: Karger, 1931. Pp. 146.—*R. R. Willoughby* (Clark).

4299. Lewin, K. Die psychologische Situation bei Lohn und Strafe. (The psychological situation in reward and punishment.) Poznan: Poznanskie Towarzystwo Psychol., 1931. Pp. 55; also Leipzig: Heryel, 1931. Pp. 67.—*R. R. Willoughby* (Clark).

4300. Lindenbergh, M. Testing of the theories of the origin of the “treppé” of Bowditch on skeletal muscles of the frog. *Arch. néerl. de physiol.*, 1931, 16, 477-501.—The author concludes that in comparison with some nine other theories of the “treppé” of Bowditch that of Lee is probably the most accurate. According to Lee, the “treppé” is probably caused by fatigue substances, such as CO₂, lactic acid, and phosphoric acid, which, acting in weak dilutions, have a stimulating effect on skeletal muscles. Its end cannot be satisfactorily explained on the basis of a concentration of either CO₂, or lactic acid acting as poisoning factors; whether phosphoric acid acts in this way still remains uncertain. Most probable is the supposition that the three substances acting together in concentrated form or some still unknown fatigue substance brings the “treppé” to an end.—*C. P. Stone* (Stanford).

4301. Lindenbergh, M. On the influence of mono-iodoacetic acid and NH₃ on the character of the “treppé” of Bowditch. *Arch. néerl. de physiol.*, 1932, 17, 1-11.—Lee, who has, according to this author, provided the best working hypothesis as to the cause of the treppé of Bowditch has said that fatigue substances (phosphoric acid, lactic acid, and CO₂) present in weak concentrations act as a tonic and thereby give rise to the treppé. If their concentration increases they finally act as poisons and this action coincides with the maximal contraction of the fatigue curve. The author attempts to determine whether phosphoric acid and lactic acid are indispensable for getting the treppé. Working with the gastrocnemius muscles of frogs, he poisoned these muscles with mono-iodoacetic acid, which leaves them capable of contractions, but in a condition in which phosphoric acid and lactic acid do not increase with muscular activity. It was found in repeated experiments that the treppé appears in the presence of mono-iodoacetic acid poisoning and in the absence of increasing lactic acid and phosphoric acid. Thus Lee's theory that the treppé is due to weak concentrations of these fatigue substances is not substantiated. The author calls attention to the well-known hypothesis that other unknown fatigue substances, uncontrolled by the mono-iodoacetic acid, may have been responsible for the treppé. If such is the case,

Lee's hypothesis, in a modified form, would still be tenable.—*C. P. Stone* (Stanford).

4302. Longo, A. *Infuenza della fatica fisica e mentale sulla funzionalità gastrica.* (The influence of physical and mental fatigue on the gastric functions.) *Rass. di med. appl.*, 1932, 3, 210-214.—The author has concluded from experiments that in the great majority of cases examined physical work has stimulated motor power and the secretions of the stomach. Only in the case of physical fatigue carried to the last degree does gastric motility seem diminished. After mental work the variation of the hydrochloric secretion and that of gastric motility is inconstant and has only slight changes, with a tendency to diminish, relative to the rest period.—*R. Calabresi* (Rome).

4303. Metalnikov, —. *Facteurs biologiques et psychiques de l'immunité.* (Biological and mental factors in immunity.) *Presse méd.*, 1932, 40, 753-756.—There exist two kinds of immunity: the immunity of adaptation, which is an adaptation or a progressive accustoming to toxins, and an immunity of defense. Contrary to the immunity of accustoming, the immunity of defense is based on the augmentation of sensibility of the cellule, that is to say on the faculty which the cells have of reacting more actively in the destruction of microbes which have penetrated into the organism. In immunization there is produced a sort of hyper-sensitivity of the cellules of the organism; after this immunization the nervous system acquires a new faculty: that of acting in a specific way against a given antigen. It is through memory that it may be explained why this immunity may endure for a very long time. This has necessitated, says the author, the working out of special methods of education, of exercises which would develop in man the dominion of the will over one's own body.—*Math. H. Piéron* (Sorbonne).

4304. Ozorio de Almeida, M. *Principes pour une méthode de mesure de la fatigue.* (Principles of a method of measurement of fatigue.) *C. r. Soc. biol.*, 1932, 109, 1164-1166.—The author admits that the maximal strength of a muscle or of a group of muscles is a function of the maximal force F which the muscle is able to develop and of the ensemble of the functions of repair. In order to measure the fatigability of a muscle, it is necessary to measure the maximal force F and the maximal strength P which it is capable of developing during prolonged work. It has been known, since Mosso, that it is possible to prolong work indefinitely without a reduction in the extent of contraction if a frequency is taken sufficiently small so that the muscle has time to recover between successive contractions. The greatest frequency compatible with this indefinite task indicates the maximum of the capacity for repair of muscle and at the same time its maximal working power.—*Math. H. Piéron* (Sorbonne).

4305. Pallestrini, E. *Su alcuni disturbi labirintici residuati alle rachianestesie.* (On labyrinthine disturbance after spinal anesthesia.) *Riv. oto-neur.*

ostal., 1929, 6, 1-24.—In this study, which concerns the labyrinthine disturbances remaining after spinal anesthesia, the author describes labyrinthine phenomena, which consist of attacks of vertigo with abnormal nystagmus reactions. Their duration varies, and they occur at least several hours after the injection of the anesthetic. The course of the vestibular manifestations allows us to distinguish three different periods in their evolution: (1) initial period; (2) period of full development; (3) resolution period. The origin of these disturbances is probably to be found in toxic bulbar changes which are more strongly accentuated for the vestibular nuclei, but the symptomatic accessory manifestations depend greatly upon the simultaneous vasomotor bulbar disturbances which are often caused by spinal anesthesia. The chemical composition of the anesthetic is of less importance than the technique of the injection; neurovegetative hypotonic conditions may be considered as individually predisposing factors.—*R. Calabresi* (Rome).

4306. Rademaker, G. G., & Hoogerwerf, S. *Observations sur les réflexes toniques labyrinthiques.* (Observations on the labyrinthine, tonic reflexes.) *Arch. néerl. de physiol.*, 1931, 16, 305-336.—Excellent photographs illustrating the effects of brain-stem injuries in cats. The article is highly technical and primarily of interest to physiologists working on spinal cord reflexes in mammals.—*C. P. Stone* (Stanford).

4307. Rudeau, A., & Bonvallet, M. *Action de la scopolamine sur les chronaxies motrices périphériques. Relation avec la coordination des mouvements.* (Action of scopolamine on the peripheral motor chronaxies. Relation to the coordination of movements.) *C. r. Soc. biol.*, 1932, 109, 1193-1195.—The authors wished to study the influence of scopolamine, administered intravenously, on the chronaxies taken at the motor point of antagonistic muscles of the normal animal, on the extensor and deep flexor of the big toe. The action of scopolamine consisted in bringing the chronaxies nearer together, sometimes to the point of equalizing them. Motor incoordination accompanies this modification of chronaxies.—*Math. H. Piéron* (Sorbonne).

4308. Van Harreveld, A. *On the phenomenon of Sherrington.* *Arch. néerl. de physiol.*, 1932, 17, 132-133.—An experiment was performed on cats to determine whether uninjured posterior roots of the caudal lumbar and the upper sacral spinal nerves prevent the phenomenon of Sherrington taking place, as has been claimed by Van Rynberk. It was found that by stimulating the nervus ischiadicus and by injecting acetylcholine into the aorta abdominalis strong pseudomotor reactions, the phenomenon of Sherrington, were elicited; at the same time good sensitivity of the legs was present. Hence it is concluded that Rynberk's failure to obtain the phenomenon of Sherrington with intact posterior roots must be attributed to other factors than the intact posterior roots.—*C. P. Stone* (Stanford).

4309. Van Loon, F. H. G. Quelques observations et expériences sur le rôle de l'instinct chez l'enfant. (Some observations and experiments on the rôle of instinct in the child.) *J. de neur et de psychol.*, 1931, 31, 309-320.—Psychologically there exists an antagonism between instinct, which comprises qualities that are innate in the species and invariable, and intelligence, which is individual and varies with the personality. Instinct made the survival of animal life possible, while intelligence enables man to act in the wisest and most efficacious way under special and new conditions. The collaboration in man between instinct and intelligence is very complicated and can be best studied in the primitive and in the child. In these, intelligence comes into play only after the intense concentration of attention on the satisfaction of physical needs has diminished. The author gives a number of examples from the life of his own children to illustrate the gradual replacement of instinctive tendencies by intelligent acts.—*H. Sys* (New York).

4310. Weinmann, K. Zur Psychogenese und Psychotherapie endokriner Störungen. (Consideration of the psychogenesis and psychotherapy of endocrine disturbances.) *Inst. Zsch. f. Indiv.-psychol.*, 1931, 9, 108-112.—Dysfunctioning of glands is frequently the result of emotional disturbance. All treatment of glandular dysfunctions, by implication, requires the readjustment of the individual to his total life situation.—*O. N. de Weerdt* (Beloit).

4311. Worms, G. L'examen de la fonction vestibulaire. (The examination of the vestibular function.) *Arch. de méd. et de pharm. militaires*, 1931, 94.—A study of the vestibular function is useful for determining the aptitude of candidates for piloting airplanes, with particular insistence upon the methods of exploration of the function of equilibration. After an anatomical description and physiological data on the effects of vestibular excitation, the author presents the method to be followed in order to make an examination of equilibration. This examination has two aspects: (1) the study of spontaneous disturbances with simple tests; (2) the study of disturbances provoked by the artificial excitation of the labyrinth. Worms presents in review for these two sorts of investigations the Romberg test, the goniometric test of Von Stein, the test of retarded equilibration of R. Floy, the Babinski-Weil test of angular deviation, the raised-arm test of Barré, and the variants of Hautant. He insists on the caloric test of Bárany-Brunnings and on the variant of Kobrack. He gives next the rotary tests (Buys, Grivot, Moure), the pneumatic test, and the galvanic test. He concludes by indicating those which may be indicative or contra-indicative in the matter of the measurement of an aviator. No bibliography is given.—*Math. H. Piéron* (Sorbonne).

[See also abstracts 4213, 4221, 4269, 4270, 4271, 4333, 4363, 4371, 4488, 4517, 4523, 4556, 4579.]

PLANT AND ANIMAL BEHAVIOR

4312. Anderson, J. E., & Smith, A. H. Relation of performance to age and nutritive condition in the white rat. *J. Comp. Psychol.*, 1932, 13, 409-446.—Three groups of white rats fed, respectively, a normal diet, a quantitatively deficient diet, and a qualitatively deficient diet, were trained on an habituation box, a problem box, and a maze. A sample of the animals' activity (motivation) was obtained for one hour daily by means of revolving drums. Each group of rats was subdivided into various age groups. It was thus possible to study the effect of stunting for various ages and for various degrees of "motivation." The time differences were in favor of the stunted groups, while the error differences were in favor of the normal animals. The differences were not treated statistically; they are probably insignificant, however. The stunted animals were much more active than the normals. Older rats were found to be less active than the younger animals, to take more time in the habituation box and maze, and to solve the problem box in less time than the younger rats. The age differences were similar regardless of the nature of the diet. Although "the differences are . . . slight and somewhat inconsistent . . . the study as a whole would indicate that the stunted animals in their performance are nearer normal animals of their own weight than animals of their own age and normal weight." Bibliography of 15 titles.—*N. L. Munn* (Pittsburgh).

4313. Buytendijk, F. J. J., & Fischel, W. Teil und Ganzes bei der Orientierung von Ratten. (Part and whole in the orientation of rats.) *Arch. néerl. de physiol.*, 1931, 18, 214-233.—The question of the specific significance of part and whole has been reported in an earlier investigation by Buytendijk. In this report attention was directed to the finding that, with the dog, so long as the entire complex of stimuli with which the animal was confronted remained unchanged, the individual part seemed to play only a minor rôle in determining the reactions; but, with alteration of the total format, the weighty rôle of the individual element became manifest. The present experiment deals with five rats. The set-up consisted primarily of a table-top walled in by black cardboard. The animals had entrance to this room through a small opening in the wall at the middle of one end of the table top. At the end opposite the entrance the animals were confronted with eleven small compartments, through one of which they could run to the nest. The gang-plank leading to the nest was invisible to the animals until after a choice of compartment had been made. It was placed nearer to the left than to the right wall and was indicated by different shades of paper to the right and left of it. After the rats had been over-trained until they ran with directness and dispatch to the correct compartment, alterations in the set-up were made and the effects of these alterations carefully noted in crucial series of experiments. It was found through variations in the positions of the side walls and differently tinted papers at the exit wall that the com-

partments indicated by the white paper (in contrast with those indicated by black paper), together with the left side wall, formed an *Orientierungsgestalt*. Measures of variability are not presented in the tabular summaries.—*C. P. Stone* (Stanford).

4314. Buytendijk, F. J. J., & Fischel, W. Versuch einer neuen Analyse der tierischen Einsicht. (An attempt at a new analysis of animal insight.) *Arch. néerl. de physiol.*, 1931, 16, 449-476.—Hunter's experiments with the rat in the temporal maze are critically examined as to fundamental conceptions underlying methodology and assumptions made in the interpretation of results. Taking Hunter's method as a point of departure, the author constructs mazes out of laths mounted upon staves. The first forms are simple elements of Hunter's apparatus, slightly modified in essentials, and successive forms are gradually altered until one resembling that of Hunter is reached. Rats are given a course of training on these mazes which is intended to reveal instances of insight in their reactions. The authors call attention in each experiment to the evidences of insight, and show how the habitual arises from insight reactions. Insight is found to be primary and the habitual response the resultant. As a rule 4 animals serve as the basis for conclusions reached.—*C. P. Stone* (Stanford).

4315. Combes, M. Sur des expériences pouvant amener les fourmis à transformer complètement leur mode de vivre. (On some experiments leading ants to change completely their mode of living.) *C. r. Soc. biol.*, 1932, 120, 733-735.—In *Formica pratensis*, which normally works at the surface of the nest in full daylight, the author has established that these ants were aware of removals made at the rate of one ant per hour. These ants, placed in an artificial nest, showed a complete change; they worked at night and stayed hidden during the day, with only their antennae left visible. Instead of removing individuals, the author replaced the ants at the same rate of one per hour; then instead of going out at night, the ants gradually resumed their old habitual diurnal life.—*Math. H. Piéron* (Sorbonne).

4316. Dennis, W. Multiple visual discrimination in the block elevated maze. *J. Comp. Psychol.*, 1932, 13, 391-396.—White rats run on a block elevated pathway did not respond appropriately to the new visual cue when two units of the maze were changed in direction by partial rotation. When the units were constantly changed in a chance order, the rats learned the problem as a visual discrimination. The maze pattern was such as to eliminate directional orientation. Dennis says, "While a multiple visual discrimination habit can be developed in the block elevated apparatus by the use of typical discrimination procedure, the employment of maze procedure during the training period results in a different sensory control. The maze was easily learned in spite of the fact that a food-box orientation could not contribute to the choice of the true pathway." Seeing rats corrected their errors before reaching the end of

the blind alleys, whereas blind rats ran to the end. Bibliography.—*N. L. Munn* (Pittsburgh).

4317. Dorcus, R. M., & Gray, W. L. The rôle of kinesthesia in retention by rats. *J. Comp. Psychol.*, 1932, 13, 447-451.—Rats reinstated a maze habit after parts of limbs, tail, and muscles had been removed. Such operations markedly changed the kinesthetic patterns of response, yet only one out of six rats made an error in running the maze several days after the operation. The results are interpreted as a refutation of the theory that kinesthesia is the sole factor in maze habits. Bibliography.—*N. L. Munn* (Pittsburgh).

4318. Fish, M. W., & Windle, W. F. The effect of rotatory stimulation on the movements of the head and eyes in new-born and young kittens. *J. Comp. Neur.*, 1932, 54, 103-107.—Although the vestibular apparatus is sufficiently developed in the new-born kitten to permit it to right itself, it seems probable that the labyrinthine mechanism is still immature at this time for other vestibular reflexes. In the present study post-natal development of vestibular functions was studied in 31 individuals with particular reference to the ocular reactions which occur in response to rotatory stimulation. It was found that vestibular nystagmus both during and following rotation appeared in 5- to 7-day-old kittens whose eyes had been opened surgically. Deviations of the eyes and irregular oscillations of the eyes precede nystagmus by one or two days, but come some time later than deviations of the head following rotatory stimulation. In the very young kittens nystagmic movements are slow and follow a latent period, but by the end of the third week the responses characteristic of the adult are found.—*C. P. Stone* (Stanford).

4319. Fritz, M. F. Maze performance of the white rat in relation to unfavorable salt mixture and vitamin B deficiency. *J. Comp. Psychol.*, 1932, 13, 365-390.—Three groups of rats were given one daily trial for 42 days on a Carr maze. One group (the control) was fed a bread and milk diet, while the other groups were fed, respectively, a diet deficient in salt mixture and a diet deficient in salt mixture and vitamin B. 148 animals were used. The experimental groups, as compared with the control, showed consistently greater daily time, retracing and error scores. The difference for errors is statistically insignificant. Since the most reliable differences were for time scores, it is suggested that speed of running is more adversely affected than accuracy of performance. In terms of trials to learn there were no significant differences between the three groups. More females than males died as a result of the defective diets. There were no differences between the two experimental groups, either in learning or in the number of deaths. The author concludes that "relatively mature white rats are able to make daily adjustments to a complicated maze situation with a high degree of accuracy even though subjected to extremely unfavorable diets." Bibliography of 26 titles.—*N. L. Munn* (Pittsburgh).

4320. Gundlach, R. H. A field study of homing in pigeons. *J. Comp. Psychol.*, 1932, 13, 397-402.—“Sixteen racing homers were released in two's and three's from a strange station 100 miles from their loft. Only 8 returned on the day of release and but 3 of these made the trip in less than five hours. Birds familiar with this course have covered the distance in two and a half hours. Analysis of the weather conditions attending the fastest and slowest flights shows the importance of visibility to length of flight. The results are interpreted to show that the primary sensory factors guiding homing pigeons are visual, and the conclusion is generalized to cover the homing activities of other birds such as terns.” Bibliography.—*N. L. Munn* (Pittsburgh).

4321. Hall, G., & Ballachey, E. L. A study of the rat's behavior in a field. A contribution to method in comparative psychology. *Univ. Calif. Publ. Psychol.*, 1932, 6, 1-12.—A 7 x 7 foot space was marked off into 49 squares. The central square (25) contained a circular wire-mesh barrier. The animals were introduced into the field at a particular square. When food was present in the center of the field the animals made circular movements around the barrier, gradually reducing the number of movements on the edges of the field. When no food was present there was less of a tendency to circle the enclosed area and more of a tendency to explore the whole field than when food was present. The advantages of this method of observing behavior for the study of motivation are indicated.—*N. L. Munn* (Pittsburgh).

4322. Harlow, H. F., Uehling, H., & Maslow, A. H. Comparative behavior of primates. I. Delayed reaction tests on primates from the lemur to the orang-outan. *J. Comp. Psychol.*, 1932, 13, 313-343.—Using both the direct and indirect method, the authors tested the delayed-reaction ability of 2 anthropoid apes (an orang-utan and a white-handed gibbon), 19 old-world monkeys, 2 new-world monkeys, and 1 lemur. The animals were tested in their cages in the zoo. Delays of 0, 5, 15, 30, 60, 120, 180, and over 180 seconds were used. The results show an increased ability progressing from the lemur and South American monkey to the old-world monkeys and from these monkeys to the anthropoid apes. It is pointed out that this ability parallels Tilney's neurological classification. The ability to use representative factors was evident in every instance, but it varied in degree. Marked individual differences, as well as differences between genera, were evident. “There is evidence to indicate that, if the difficulty of the problem is such that the animal is unable to solve it immediately (insight), the primate characteristically attempts the solution in some simple and inadequate manner, gradually eliminates these methods, and finally solves the problem. If the difficulty of the problem is then increased, the animal tends to revert to the same inadequate types of response.” High test-retest correlations were found. Extraneous sensory cues were controlled without affecting the

accuracy of response. Bibliography of 30 titles.—*N. L. Munn* (Pittsburgh).

4323. Krechevsky, I. “Hypotheses” versus “chance” in the pre-solution period in sensory discrimination-learning. *Univ. Calif. Publ. Psychol.*, 1932, 6, 27-44.—It is claimed, on the basis of an analysis of learning curves for rats which learned a multiple brightness discrimination, that the position habits which appear before an adequate solution is reached indicate that the rat is attempting to solve the problem on the basis of various “hypotheses.” A right-going habit, a left-going habit, an alternation habit, and a perseverance habit were isolated. “In the light of all of the evidence . . . it is suggested that helter-skelter unorganized trial and error response as a description of the early part of the learning process is invalid, and that we must change our description of the learning process so as to recognize the existence of organized and systematic responses at all stages of the process.” Bibliography.—*N. L. Munn* (Pittsburgh).

4324. Krechevsky, I. The genesis of “hypotheses” in rats. *Univ. Calif. Publ. Psychol.*, 1932, 6, 45-64.—“The method of obtaining crucial data in the present experiment was to offer the animals an unsolvable problem, in the sense that no one stimulus occurred systematically with the ‘correct’ alley. Any differential response to the situation and the stimuli therein would therefore have to be initiated by the animal himself. In other words, the presence of systematic forms of behavior in such a situation is to be interpreted to mean that these systems were determined not as something forced *ab extra* by the situation, but as something originating from the animal himself.” A multiple black-white discrimination set-up was used, but the black and the white alleys were switched around from trial to trial so that neither led to the food box more often than the other. Various position habits occurred, ran their course, and were replaced by others. A reaction above that which might be expected from chance factors was indicated by series of responses greater than 50% correct, plus or minus 3 sigma. The author regarded these responses as an indication that the rat develops “hypotheses” concerning the situation which confronts it. If these hypotheses prove inadequate, the rat forms and tries out new hypotheses. These hypotheses are not determined by the nature of the stimulating conditions but by the organism itself. “The external environment does not ‘work’ upon a passive and neutral organism, rather, the organism works upon the environment.” Bibliography.—*N. L. Munn* (Pittsburgh).

4325. Lashley, K. S. Studies of cerebral function in learning. VIII. A reanalysis of data on mass action in the visual cortex. *J. Comp. Neur.*, 1932, 54, 77-84.—The discovery of the small lateral area of the visual cortex which mediates pattern vision in the rat makes possible and suggests the desirability of determining whether the relationship found between extent of cortical lesions and degree of post-

operative amnesia for the habit of "light-darkness" discrimination was dependent upon the involvement of this critical area for pattern vision in the larger lesions. Previously reported data are re-examined and the following inferences drawn: (1) "Lesions which do not involve the area essential to pattern vision probably do not produce any post-operative amnesia for the brightness habit. (2) Complete destruction of the area critical for pattern vision does not entail a severe grade of amnesia. (3) The degree of amnesia is proportional to the total extent of the lesions beyond the critical area. (4) Evidence is advanced to show that this relationship cannot be ascribed to the extent of scotoma."—C. P. Stone (Stanford).

4326. Maier, N. R. F. The effect of cerebral destruction on reasoning and learning in rats. *J. Comp. Neur.*, 1932, 54, 45-75.—Two types of behavior integrations are postulated: (1) those made up of isolated experiences, and herein designated as R; and (2) those made up of contiguous experiences, and denoted by the letter L. Tests which are believed to involve these two types of behavior integrations were applied to 23 normal and 34 partially decorticated rats. Results obtained satisfy the criteria for the postulated abilities in the normal rats and indicate that they are qualitatively different. Both the experimental values and the calculated values for R (reasoning) decrease with decreasing amounts of the cerebral cortex left intact and drop off sharply when the lesions exceed 18% of the operable cortex, indicating that a large minimal amount of the cortex must be present for the functioning of R as herein tested. The calculated values for L (experimental values not discussed in this connection) remained constant in the series of operated cases, and for that reason L, or learning ability as herein studied, was not considered to be dependent upon the amount of cortical tissue intact. Tested on an eight cul-de-sac maze of simple design, the operated animals showed a great decrement in ability in comparison with normal animals on the basis of errors and trials required to satisfy a criterion of learning. Operated animals showed a greater tendency to repetition of errors in all situations than did the normal controls. Repeated tests for R given with an interval of two months, but with intervening tests for R-L and R+L during the two months, yielded decidedly inferior scores for the normal and improved scores for the operated animals. No satisfactory interpretation of this finding could be found in the present experiments. An attempt to harmonize the findings with respect to decrement in maze learning without decrement in the calculated values of L in the special test situations is made.—C. P. Stone (Stanford).

4327. Ozorio de Almeida, M. Expériences sur l'exécution et la coordination des mouvements dans les réflexes cutanés de la grenouille. (Experiments on the execution and coordination of movements in the cutaneous reflexes of the frog.) *C. r. Soc. biol.*, 1932, 109, 452-454.—In the acid reflex the coordination and execution of movements appear even after

the removal of the skin of the hind feet, which shows a certain independence of cutaneous regulatory excitations. The reflex occurs also in all positions of the animal, which shows in the same manner its independence of proprioceptive excitation. The reflex appears to escape the rule of the influence of the state of preparation of "tonus of the nerve centers," but perhaps it is true that the excitation suffices to engender this preparatory state before the reflex itself.—*Math. H. Piéron* (Sorbonne).

4328. Sanborn, H. C. The inheritance of song in birds. *J. Comp. Psychol.*, 1932, 13, 345-364.—A discussion of the literature on the inheritance of song in birds with interpolated comments concerning the author's own observations on a wide variety of birds in his own possession. Certain projected investigations are outlined. The author says, "It seems to me that we might hold tentatively that certain birds inherit their song in a fairly typical form in every species, while others are so gifted with the capacity for imitation that they either add other notes and songs to their repertoire, which constitute the individual differences, or give up their birthright entirely, as seems to be the case with the trained bullfinch."—N. L. Munn (Pittsburgh).

4329. Tsai, L. S. The laws of minimum effort and maximum satisfaction in animal behavior. *Monog. Nat. Res. Instit. Psychol.* (Peiping, China), 1932, No. 1. Pp. 49.—Experimental proof of the "law of minimum effort" is derived from a series of experiments in which white rats learned to select a route involving minimum effort. In one series of such experiments, the rat could reach the food box via either of the following pairs of doors: 0 grams attached to one door, 20 grams to the other; 0 grams attached to one door, 50 grams to the other; 20 grams attached to one door, 50 grams to the other. 88.6% of the reactions in the first experiment were to the door containing no added weight. The two other experiments gave similar results, the lighter door being favored. In a further series of experiments, the rats were confronted by two paths of equal length. Each path contained an obstacle to be climbed. In one alley there was a wall 25 cm. high and in the other a wall of 35 cm. 96% of the reactions were to the path containing the lower wall. When 4 walls confronted the animals (25, 35, 45, and 55 cm. high) 75% of the reactions were to the lowest wall. Another experiment, with elevated pathways, was devised to determine "whether white rats would choose a broad path to food instead of one which is so narrow that it requires more effort to traverse in order to avoid the risk of falling down." 80% of the responses were made to the wider pathway. The data on relative length of alley (De Camp, Kuo, Yoshioka, White and Tolman, Gengerelli, Peterson, Tolman, Honzik and Robinson) are reviewed and interpreted as evidence for the law of minimum effort. The data on temporal discrimination (Sams and Tolman) are similarly treated. The purpose of the experiments on maximum satisfaction was to determine "whether white rats, under the pressure of

an organic need, would choose the alternative that gives a higher degree of satisfaction in relieving that specific need." "Satisfaction" is considered not as a conscious state but as an alleviation of physiological tension. "The term 'satisfy' is used here in the sense in which we say in mathematics, 'These data satisfy that equation.'" 14 rats deprived of vitamin B and water were confronted with the possibility of selecting a 2% salt solution and a 5% salt solution. 94% of the total number of choices were in favor of the 2% salt solution, which gave "a higher degree of satisfaction in relieving the organic need of thirst." When confronted with a choice between plain water and a 2% salt solution the animals chose the former in 97% of the trials. In a further experiment the author determined the relative amount of 2% and 5% salt solution consumed by the rats over a period of 24 hours. The 2% solution was consumed much more than the 5% solution. The author says, "As the organic need of thirst can be relieved by water but accentuated by salt intake, the largest consumption of water with the least amount of salt means the greatest relief of that organic need. Hence our law of maximum satisfaction." In a further experiment rats were offered a choice between water and food after deprivation of water or food. In each case the majority of the responses were in favor of the alternative offering the greatest satisfaction of the organic need. A final experiment showed that "When confronted with food or water vs. food and water combined, the white rat, under the pressure of both thirst and hunger, chooses food plus water instead of either food or water alone. This means that the animal chooses the greatest relief in terms of the number or summation of organic needs." The two "laws" are: "(1) Among several alternatives of behavior leading to equivalent satisfaction of some potent organic need, the animal, within the limits of its discriminative ability, tends finally to select that which involves the least expenditure of energy (law of minimum effort). (2) Among several alternatives of behavior involving equivalent expenditure of energy, the animal, within the limits of its discriminative ability, tends finally to select that which leads to the greatest relief of organic needs (law of maximum satisfaction)." Bibliography.—*N. L. Munn* (Pittsburgh).

4330. Valkor, A. La vie du gorilla au Gabon. (The life of the gorilla in the Gaboon.) *Bull. mus. nat. d'histoire natur.*, 1931, 3.—Exact notes on the life, nutrition, and behavior of gorillas. These animals live in troops. At night, the females and their young gather in the trees, while the chief of the band sleeps on the ground with his back against the trunk of a tree. When the band has the good luck to encounter a tree loaded with fruit, the females gather the fruits and take them to the male, who remains at the foot of the tree. The author tells about having seen Garner, who came to study the language of the apes. He had brought a large metallic cage in which he locked himself only once. A mother gorilla uttered several cries in front of the cage and ran away into

the forest. That sufficed for him to write his book on the "language of the apes."—*Math. H. Piéron* (Sorbonne).

4331. Washburn, M. F., & Broer, M. The relation of hunger and activity drives in maze running by mice to the factor of habituation. *II. J. Comp. Psychol.*, 1932, 13, 403-407.—Mice are divided into those whose "drive" in running the maze is hunger and those whose drive is "desire for activity." The hunger-driven animals are those who yield high day-to-day speed-hunger correlations and high day-to-day speed-correctness correlations. The animals "whose speed is not correlated positively with long eating or correct running tend to be those whose average speed is highest, and may be regarded as motivated by the desire for activity." When familiarity with the maze and the peculiarity of the blind alleys are partialled out, the above conclusions still hold. It is asserted that "hunger-motivated mice tend to learn more thoroughly than do activity-motivated mice."—*N. L. Munn* (Pittsburgh).

4332. Wiley, L. E. The function of the brain in audition. *J. Comp. Neur.*, 1932, 54, 109-142.—The investigation, involving 65 rats, was carried out for the purpose of determining whether a simple auditory habit involving a specific reaction to a buzzer noise is a function of the cerebral cortex. As subsidiary points the author sought to determine the effects of various amounts of destruction in different cortical areas, and whether quantitative relationships between retention and re-learning the auditory habit hold as found by Lashley in the case of maze and certain visual habits. His results clearly indicate that the cortex does play an important rôle in the formation of the auditory habit herein studied, and that this auditory function is mediated by a limited area of the postero-lateral cortex closely delimited by Fortuyn's area p. Complete destruction of large areas in this delimited zone resulted in abolition of the auditory habit, although re-formation of the habit was possible, albeit at a somewhat slower rate in certain cases. A direct relationship between the post-operative amnesia and the extent of the cortical lesion was found. To the author this suggests that the same kind of mass relationship holds for the auditory habit and extent of brain lesions as was found by Lashley for the brightness discrimination habit. A relatively complete tabular summary and statistical analysis of the experimental data is given, and suggestions for further investigations are appended.—*C. P. Stone* (Stanford).

4333. Windle, W. F., & Fish, M. W. The development of the vestibular righting reflex in the cat. *J. Comp. Neur.*, 1932, 54, 85-96.—Working with a series of 72 fetal kittens between the ages of 40 and approximately 60 days, the authors found that the vestibular righting reflex appears in fetuses of about 54 days' gestation (100 to 115 mm. crown-rump length); its appearance antedates the normal termination of the gestation period by about 6 days. The body righting reflex, initiated by proprioceptive im-

pulses of the muscles and exteroceptive impulses from the skin, seems to be present a few days earlier than the vestibular righting reflex. Both righting reflexes are well developed prior to the time of normal birth.—*C. P. Stone* (Stanford).

4334. Windle, W. F., & DeLozier, L. C. The absence of painful sensation in the cat during stimulation of the spinal accessory nerve. *J. Comp. Neur.*, 1932, 54, 97-101.—It is a well-established fact that the spinal portion of the 11th cranial nerve contains a sensory as well as a motor component of considerable size. Although the responses made by cats in which the intact spinal accessory nerves were stimulated indicated some resulting discomfort, the evidence would seem to indicate that the majority of the sensory neurones of this nerve do not conduct pain. Their morphology and central distribution harmonizes with this experimental evidence. In all probability the impulses conducted by the sensory portion of the spinal accessory are proprioceptive in nature.—*C. P. Stone* (Stanford).

[See also abstracts 4204, 4251, 4270, 4271, 4300.]

EVOLUTION AND HEREDITY

4335. Brown, M. J. A family of musicians and ministers. *Eug. News*, 1932, 17, 14-15.—Two musical parents had seven children, all "exceptionally musical."—*R. K. White* (Stanford).

4336. Castaldi, L. Relazione sull' indagine di mille genitori di famiglie numerose nella città di Cagliari. (Report on the observation of one thousand parents of numerous families in the city of Cagliari.) *Atti Soc. cultori delle sci. med. e nat. in Cagliari*, 1931, 5, 259-296.—*R. Calabresi* (Rome).

4337. Castaldi, L. Sul problema biologico e demografico della prolificità. (The demographic and biologic problem of prolificacy.) *Rass. int. clin. e terap.*, 1932, 13, 23.—The observations of the author relate to southern Sardinia, where large families are frequent. The three communes studied present different economic and climatic differences. The subjects were 1312 individuals of both sexes, who both had large families and were themselves members of large families. The author discovered that the most prolific individuals were healthy and normal, belonging to the average type of the population in question, which in this region is leptosomal, while in other countries the greatest fertility has been found among the pyknic type. Besides the factor of morphological constitution, the ethnic factor must be taken into consideration; in every case the asthenic and sthenic types among the leptosomes and pyknies must be distinguished. The morphological and functional conditions in the sexual sphere are very important. Morphological affinity between the two members of a couple is favorable to fertility. The author then studies the factors leading to sterility, and concludes that the constitutional factor is relatively unimportant compared to pathological conditions and eco-

nomic, social and moral motives.—*R. Calabresi* (Rome).

4338. Creswell, R. Inheritance of left-handedness and mechanical capacity. *Eug. News*, 1932, 17, 13-14.—An ambidextrous man had a father who was a machinist, and a left-handed uncle.—*R. K. White* (Stanford).

4339. Heaton, M. L. The inheritance of artistic traits. *Eug. News*, 1932, 16, 211-213.—Among 21 blood relatives, 9 had "artistic traits." 7 of these had talent both in music and in such things as painting.—*R. K. White* (Stanford).

4340. Northrup, W. C. The inheritance of athletic capacity. *Eug. News*, 1931, 16, 213.—Among 14 blood relatives, old enough to show athletic ability, 12 have showed exceptional ability.—*R. K. White* (Stanford).

4341. Rosanoff, A. J. A study of mental disorders in twins. *Eug. News*, 1932, 17, 37-39.—404 pairs of twins, in each of which one or both are affected by a mental disorder, have so far been studied. This is "a larger amount of such material than the total heretofore published," but 400 more pairs are desired. It is expected that the material will ultimately be published in two separate monographs, in addition to the parallel study of mental disorders in siblings which has just been completed by an associate, D. G. Humm. Among the "probably monozygotic" twins, there were 15 cases in which only one was affected, and 116 in which both were affected. Among twins of the same sex but "probably dizygotic," the corresponding numbers were 67 and 53 respectively; while among twins of opposite sex they were 75 and 26. The percentage of "both affected" was markedly higher among the monozygotic twins in each of eight clinical groups: behavior problems, crime, delinquency, mental deficiency, epilepsy, dementia praecox, manic-depressive psychosis, and miscellaneous. In the "mental deficiency" group, among monozygotic twins there were 60 cases in which both were affected and 3 in which one was affected; among dizygotic twins, same sex, the corresponding numbers were 24 and 17.—*R. K. White* (Stanford).

4342. Segers, J. E. Examen psychologique de deux jumeaux identiques. (Psychological examination of two identical twins.) *J. de neur. et de psychiat.*, 1931, 31, 335-356.—The author gives a brief review of the literature on identical twins and states that these problems provide a great deal of valuable information regarding the relative influence of heredity and environment, native tendencies and education. According to Jacques Ley, the psychological examination shows a considerable parallelism in the development of intelligence in identical twins. He found an astounding similarity between their normal as well as their pathological reactions, and believes that the fact that environment is of only secondary importance has been proved in identical twins reared apart from infancy. The author presents the history of two boys, 12½ years old, probably monozygotic

twins, whom he subjected to a number of psychological tests and examinations, the protocols of which are given in detail. The identity in their affective manifestations was less pronounced than that in their intellectual characters. A bibliography of 30 titles is given.—*H. Syz* (New York).

4343. Wagner-Manslau, W. Numerical proof of the influence of idioplasm on the number of children of the nobility. *Eug. News*, 1932, 17, 33-35.—The records of 1,819 marriages were obtained from the Gotha Imperial Almanac and the Gotha Almanac for Counts, 1912. The 414 married men whose parents had one or two children have on the average 2.13 children. The 436 married men whose parents had six or more children have on the average 2.85 children. This differential fecundity of .72 "means that fertility depends, in a large measure, upon inherited tendencies. Naturally the influence of the mother also exercises its influence."—*R. K. White* (Stanford).

[See also abstracts 4328, 4348, 4417, 4446.]

SPECIAL MENTAL CONDITIONS

4344. Adler, A. Persönlichkeit als geschlossene Einheit. (Personality as a closed unity.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 81-88.—Personality, when treated as the life of a soul, is a mere transcendental abstraction. Studies in heredity likewise deal in abstractions; conclusions are today drawn much more carefully from studies of twins than the vigor with which the researches were attacked indicated as probable. Factors in human behavior, such as feeble-mindedness and endocrine abnormalities, were likewise fully recognized. Adler meets criticisms from these angles. Consciousness is functionally wider in its scope than conceptual thinking—hence animals may be conscious, and human beings may be influenced in their thinking and behavior by unconscious processes. In theory derived from clinical practice, the general and specific trends of an individual are accepted as forming a unity, since they can be determined from the various expressions of personality, such as dreams, likes and dislikes, fears, transferred emotions, and idiosyncrasies of thought and action. These in turn are all explicable in terms of specific experiences—the personality is a unity.—*O. N. de Weerdt* (Beloit).

4345. Benichon, R. Contribution à l'étude des hypermnesies. (Contribution to the study of the hypermnésias.) *Rev. phil.*, 1932, 57, 112-142.—For a long time hypernesia has been considered as an exceptional phenomenon related to pathological psychology. It is known today through the confessions of writers and of psychologists that certain reminiscences presenting an incontestably hypermnestic character may belong to the normal activity of consciousness. The author bears personal testimony and gives some examples, taken especially from the literature of Proust. The author emphasizes the prevailing action in the production of picturesque remi-

niscences, of the redoubling of certain representations (words or images).—*Math. H. Piéron* (Sorbonne).

4346. Besterman, T. The mediumship of Rudi Schneider. *Proc. Soc. Psych. Res.*, 1932, 40, 428-436.—This article is a survey of Schneider's history and a review of the French report on his mediumship. An infra-red ray was arranged to ring an electric bell, or to take a flash-light picture, when interrupted. The disturbances of the ray, when registered graphically together with a pneumographic record of the medium's breathing, indicated, "failing the discovery by the investigators of unforeseen circumstances, that the medium Rudi Schneider did during the sittings under review extrude under partial mental control an invisible and non-photographable substance capable of absorbing and / or refracting an infra-red ray and of oscillating in it at a rate double that of his rate of respiration" (which in the trance averaged "fifteen times greater than normal").—*W. S. Taylor* (Smith).

4347. Birnbaum, F. Die individualpsychologische Versuchsschule in Wien. (The individual-psychological experimental school in Vienna.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 176-183.—A grade school in the regular Vienna system was organized in September, 1931, to give instruction according to individual-psychological principles. Special attention is to be given to the personality adjustment of the children.—*O. N. de Weerdt* (Beloit).

4348. Blaeckerken, J. Aus dem Entwicklungs-gang eines Zwillingspaares. (Factors in the development of a pair of twins.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 207-216.—Case histories are presented of the personalities developed by a pair of girl twins. Consideration is given to the probable influence of the personality organization of each of the parents, of the unfair discrimination shown by them toward the two girls, and of the reciprocal influences of the twins on each other in the course of their development.—*O. N. de Weerdt* (Beloit).

4349. Bozzano, E. Dei fenomeni di "apporto." (The phenomena of apports.) Rome: Luce e Ombra, 1931. Pp. 124.—Bozzano in this monograph has reviewed and commented upon six cases which have to do with the phenomenon of the penetration of matter through matter, and thirty cases of apports. The examples chosen differ from those of Richet, viz., of the mediums Bailey and Anna Roth, for the episodes considered here were almost all obtained at request. The author believes that he is able to demonstrate that the phenomena are produced by means of an almost instantaneous process of disintegration and reintegration. In regard to the presumable origin of the phenomena in question, he observes that the laws of the physical order are not able to furnish any direct proof of the existence and the survival of the human spirit; they only authorize us to affirm the sub-conscious origin of apports.—*V. D'Agostino* (Turin).

4350. Brachfeld, O. Ortega y Gasset über Alfred Adler und über die Individualpsychologie. (Ortega

y Gasset on Alfred Adler and individual-psychology.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 139-140.—In a personal interview the Spanish philosopher is reported as asserting that psychology must go beyond its study of elements and functions and view the human personality in its totality and individuality, in its vital goals. Psychology, he says, must be dynamic, integral (studying the total personality), and individually concrete. These criteria he finds recognized in Adler's individual-psychology.—O. N. de Weerdt (Beloit).

4351. Chotzen, F. Ein lehrreicher Fall von Exhibitionismus. (An instructive case of exhibitionism.) *Ärztl. sachv. Ztg.*, 1932, 37, 1-7.—A very difficult case of exhibitionism, in which the personality of the person involved, the examination of the offense, a certain periodicity of its manifestation, and the lack of discretion on the part of the person made the case appear to be one of an irresistible compulsion. However, the author believes that in some cases the strength of the urge and capacity for withstand- ing it may change. In case of self-control threatened punishment may offer a hindrance, but in many cases voluntary castration seems to offer the only way out of the difficulty.—E. H. Kemp (Clark).

4352. Comte, M. Les perversions sexuelles par compensation affective. (Sexual perversions as results of affective compensation.) *Thèse de med. de Paris*, 1931. Pp. 111.—Compensation, like repression or transference, appears as a defense reaction, a compromise by which the subject rids himself of psychological conflicts resulting from the disharmony between individual tendencies and social necessities. The author seeks to establish the psychological mechanism of this compensation. A short bibliography completes the study.—Math. H. Piéron (Sorbonne).

4353. Crookshank, F. G. Individualpsychologie und allgemeine Medizin. (Individual-psychology and general medicine.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 35-52.—A chapter from a forthcoming book. The writer presents as his main thesis that the general practitioner must learn to evaluate mental symptoms as he does physical symptoms. Verbal statements indicating attitudes are as "objective" as reports on pains and other assumed physical conditions. Crookshank holds with Adler that in cases of illness and neuroses every phenomenon, physical and mental alike, has some sense and serves some purpose for the patient.—O. N. de Weerdt (Beloit).

4354. Freud, S. Kleine Schriften zur Sexualtheorie und zur Traumlehre. (Minor papers on the sexual theory and the doctrine of dreams.) Vienna: Int. Psychoanalyt. Verlag, 1931. Pp. 406.—R. R. Willoughby (Clark).

4355. Gerwig, G. W. Ambition: an element in the character of the good American. New York: American Book, 1932. Pp. 96. \$40.—R. R. Willoughby (Clark).

4356. Grabinski, B. Spuk- und Geistererscheinungen oder was sonst? (Spectral appearances—or what?) Hildesheim: Borgmeyer, 1931. Pp. 28.—R. R. Willoughby (Clark).

4357. Holub, M. Die Entwicklung der individualpsychologischen Bewegung in Amerika. (The development of the individual-psychological movement in America.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 140-144.—Various movements in the United States such as visiting teachers, educational and vocational counsellors, and mental hygiene movements as expressed in the proposed central and sub-clinics for the New York City school system, psychological workers in connection with juvenile courts, reform of penal institutions, etc., are cited and sometimes briefly characterized. These are presented as "breathing the spirit of individual-psychology," and as the result of at least the indirect influence of the Adlerian movement. This influence has become direct and recognized, since Adler himself has visited the United States and personally presented his views. The writer hopes later to study more exactly the courses of these trends.—O. N. de Weerdt (Beloit).

4358. Holub, M. Individualpsychologische Tests. (Individual-psychological tests.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 59-71.—Eight selected pictures suggesting various social relationships were sketched. There is no thought of standardizing the method of presentation or the interpretation of results. The quantitative elaboration of the reactions to them is deliberately avoided; the reactions are used to substantiate the analysis already determined by established Adlerian clinical procedures.—O. N. de Weerdt (Beloit).

4359. Horvat, A. Ueber das Lampenfieber. (The drive to get into the limelight.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 29-34.—Typical symptoms of *Lampenfieber* ("lamp fever") are boasting, self-depreciation, and voiced forebodings of defeat. These expressions are all driven by a strong feeling of inferiority. Under any given circumstances, that trait will find expression which appeals to the subject as gaining him the greatest credit in case of success, or as best absolving him from responsibility in case of failure. In clinical practice the neurotic subject must be helped to develop better means for achieving his goal of recognition than the artificial subterfuges to which he tends to resort.—O. N. de Weerdt (Beloit).

4360. Jones, E. S. Traits of the superior personality. *Person. J.*, 1932, 11, 86-90.—Many college men have difficulty in getting placed in satisfactory positions after graduation because of poor personalities, so-called. In an effort to analyze the significant traits which differentiate superior from inferior personalities of approximately the same education and intelligence, ratings were made by personnel men in industry and advanced students of psychology of 145 men on each of 25 traits or modes of behavior. Although there is no great consistency among judges, 8 of these traits tend to differentiate very distinctly

persons who are considered "superior" from those who are considered "inferior" by the judges. No significant differences in important traits were found which set apart sales personalities from administrative personalities or teachers of merit.—(Courtesy *Person. J.*).

4361. Klatt, G. Rausch. (Intoxication.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 110-124.—A romantic, esthetic, and philosophic treatment in abstract terms, based largely on Nietzsche.—*O. N. de Weerdt* (Beloit).

4362. Krausz, E. O. Biozentrische oder individual-psychologische Charakterkunde? (Biocentric or individual-psychological character study?) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 19-29.—The article is a defense against two writers who have attacked the individual-psychological position on the assumption that it justifies and even seeks to establish as a standard type the "average man of the masses" (*Massemensch*) and therefore to condemn creative individuality. Adler and his followers, when successful, would thus rob life of its mystical elements and sentiments and reduce it to a drab, devitalized system of logically reasoned social relationships.—*O. N. de Weerdt* (Beloit).

4363. Lahy, J. M. Mesure de la suggestibilité motrice. (The measurement of motor suggestibility.) *Année psychol.*, 1930, 31, 242-245.—A variation in the old apparatus designed by Binet and used in the study of motor suggestibility has been worked out by the author and is described here. He found that 100 subjects, tested twice with a three-hour interval, showed a coherence correlation of $.733 \pm .046$ on his improved test, while a similar group showed a test-retest correlation of only $.126 \pm .098$ on the old test.—*E. H. Kemp* (Clark).

4364. Lipszyc, S. Testproben in der individual-psychologischen Praxis. (Tests in individual-psychological practice.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 56-59.—Individual-psychologists do not regard any mental state as permanent, and believe that any individual's ability at any time depends on the total influence of his attitudes. The individual-psychologist, furthermore, works on deeper mental levels than can be reached by tests, levels which are revealed rather by childhood memories, vocational phantasies and dreams. The article points out justifications for the use of tests by individual-psychologists.—*O. N. de Weerdt* (Beloit).

4365. Märker, F. Typen. Grundlagen der Charakterkunde. (Types. Fundamentals of character study.) Leipzig: Rentsch, 1931. Pp. 74.—*R. R. Willoughby* (Clark).

4366. Meinertz, J. Die kausale und physiognomische Betrachtung der Symbolbildung in Neurose und Traum. (The causal and physiognomic consideration of symbolism in neurosis and dream.) *Ber. d. 6 Cong. f. Psychother.*, 1931, 197-204.—Three kinds of consideration of neurotic symbols are possible: (1) the causal, (2) the final, and (3) the

physiognomie. Dream symbols express the definite mental attitudes of the patient during the different phases of analytical treatment. Perhaps the mind finds a kind of mirror of itself in the symbol.—*E. H. Kemp* (Clark).

4367. Oesterlen, O. Plötzliches Haarergrauen nach psychischem Insult. (Sudden graying of the hair after mental injury.) *Med. Welt*, 1931, 32, 1129-1130; 1163-1165.—The author lends support to the skepticism of Stieda as to the occurrence of sudden graying of the hair as a result of great mental shock, and asserts that certain conditions must be present in addition to mental shock: (1) a neurosis, (2) an acute disturbance of pluri-glandular metabolism brought about by the mental shock.—*E. H. Kemp* (Clark).

4368. Schumacher, H. C. Feelings of inferiority and compensatory mechanisms. *Courier of the I. C. F. N.*, 1932, 4, 4-10; 19.—*R. R. Willoughby* (Clark).

4369. Sidgwick, Mrs. H. The Society for Psychological Research. *Proc. Soc. Psych. Res.*, 1932, 41, 1-26.—A "retrospective survey of the Society's fifty years of life and work. . . . With patience and perseverance . . . we shall add to the evidence in at least these three departments, . . . telepathy between the living . . . , communication with the dead, and clairvoyance, and probably in others."—*W. S. Taylor* (Smith).

4370. Veit, V. Zur Psychologie des einzigen Bruders. (Contribution to the psychology of the only brother.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 53-56.—The great number of neurotic men patients who are only brothers of one or more sisters has long been recognized as a special group. It seems (without statistical support) that the appearance of such cases is especially frequent among men between the ages of 20 and 30. The writer explains the general and special phenomena as an outgrowth of the influence of the old double vocational and social standards for the sexes, and particularly the recent changes in social attitudes toward equal recognition of men and women. The conflict began for most patients with their entrance into school.—*O. N. de Weerdt* (Beloit).

4371. Venzmer, G. Körpergestalt und Seelenanlage. (Bodily form and mental inheritance.) Stuttgart: Franckh, 1931. Pp. 74.—*R. R. Willoughby* (Clark).

4372. Weyr, H. Grosse Männer. (Great men.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 216-223.—The writer points out the compensatory character of the attitudes, ambitions, and achievements of several historical personages who were handicapped by physical defects. Attention is also called to the probable influence of the contemporary social standards and of the personal attitudes of the parents and other associates on the personality organization. The brief sketches include those of Pericles, Alexander the Great, Christine, daughter of Gustavus Adolphus,

Count Geza Zichy, Hungarian one-armed piano virtuoso, and Kaiser William II.—*O. N. de Weerdt* (Beloit).

[See also abstracts 4211, 4212, 4292, 4305, 4307, 4433, 4451, 4467, 4511, 4515, 4519, 4530, 4531, 4542, 4556, 4565, 4572, 4575, 4602.]

NERVOUS AND MENTAL DISORDERS

4373. Adler, A. *Zwangsnurose*. (Compulsion neuroses.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 1-15.—Adler analyzes his contributions to the psychology of compulsion neuroses before and after 1912. Before 1912 compulsions were seen to be founded on a striving after personal absolute superiority, a tendency developed through over-indulgence in childhood. In the face of social problems the fear of defeat leads to temporizing and doubt, which in the neuroses are all avoiding responses. Responses that become fixed, as in compulsions, serve to protect against the feeling of inferiority, since they are such visible handicaps that any success achieved in spite of them is over-weighted. The development of compulsions is therefore identical with the total development of the personality. The "outbreak" is recognized as an abnormal tendency when the subject faces a situation which requires a developed feeling for social relationships (*Gemeinschaftsgefühl*). Since 1912 Adler has further contributed, among other insights, that the compelling force is not to be found in the compulsive movement, but in the threatening attack of social demands. The organization of such a unified personality is not mechanical and cannot be explained by heredity or as the unfolding of instinctive drives (*Triebes*). It is rather the final product of an irrational arbitrary choice in which the patient may be guided by physical inferiority, environment, imitation of others, etc. The almost invariably associated feelings of guilt or of humility, easily recognizable as pathological, are explicable as extensions of the procrastinating tendency of the disorganized individuals.—*O. N. de Weerdt* (Beloit).

4374. Adler, A. *Rauschgift*. (Intoxicating drugs.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 1-19.—Addicts are always individuals who, because of a sense of inferiority or a feeling of uncertainty, tend to seek escape from responsibility instead of facing their problems patiently and courageously. They are characterized as over-sensitive, impatient, irritable. Drugs offer escape from difficulties, sometimes through their dissociative effects, sometimes as a weapon of revenge. Many clinical cases are briefly reviewed. In closing, Adler expresses the belief that certain patients have an inherent taste for alcohol comparable to the fondness for cod liver oil shown by rachitic children, and to the appetite for sour foods shown by many individuals.—*O. N. de Weerdt* (Beloit).

4375. [Anon.] Mental diseases in the elderly. *Calif. & Western Med.*, 1932, 36, 191-194.—*R. R. Willoughby* (Clark).

4376. [Anon.] The neuroses and psychoneuroses. *Penn. Med. J.*, 1932, 35, 472-473.—*R. R. Willoughby* (Clark).

4377. Bancroft, W. D. New studies on functional psychoses. *Eug. News*, 1931, 16, 216-217.—This is an editorial based upon Bancroft's "recent address before the American Section of the American Chemical Society." Dementia praecox and allied disorders are stated to be caused by a decreased state of colloid dispersion in the brain, and manie-depressive psychoses to over-dispersion. Sodium amytaf favors coagulation, while sodium rhodanid favors dispersion.—*R. K. White* (Stanford).

4378. Barrera, S. E. Ophthalmic-encephalo-myopathy. *Psychiat. Quar.*, 1932, 6, 421-437.—The case of a 27-year-old female is presented, who, after 18 months in a state hospital for mental diseases, developed signs of diffuse involvement of the spinal cord and optic systems with marked and rapid mental deterioration. The case is designated as an intermediate type in the large group of diffuse sclerosis, Schiller's disease, acute multiple sclerosis, encephalo-myelitis and ophthalmic-neuro-myelitis. She presented a mental picture of a typical hebephrenic dementia-praecox type. The most outstanding pathological findings were diffuse degeneration of the long ascending tracts of the spinal cord and spotty involvement of the optic system, including the optic nerve, optic tract, optic radiation, and occipital cortex, as well as other sensory portions of the hemispheres. There are several cuts to illustrate the cellular changes found in brain and spinal cord. A bibliography is given.—*E. T. Burr* (Vocational Adjustment Bureau).

4379. Bellavitis, C. *La bugia patologica*. (Pathological lying.) Padua: Cedam, 1932. Pp. 118.—Lying is a normal manifestation of human nature, but it can touch the limits of anomaly and of true pathology. From this point of view there are two groups of abnormal personalities, original liars and mythomaniacs. The original or constitutional liar is in general unstable and emotional; he has a very narrow field of consciousness; he very often exhibits low intelligence and manifests deficiencies in attention, memory, and critical powers; he is exuberant or depressed. The mythomaniac is characterized by an exuberance of imagination which is pathological only in its manifestations. The author points out the forms of mythomania which are common to adolescents and to women; and the associations of pathological lying with hysteria, dysthymic forms, psychasthenia, epilepsy, etc. In the original liar and mythomaniac there is always the consciousness of lying, and, to a certain degree, the will to deceive, while in fabrication there is completely lacking any anxiety and consciousness of the truth. It is because of this that the constitutional liar ought to be prosecuted by the law when, with his lies, he causes an injury to society. According to the author, irresponsibility is a characteristic of the disease, not of the constitution. In order to evaluate testimony it is

necessary to consider the pathological tendency in lying, particularly in the presence of criminal accusations of certain kinds and reports of sexual delinquencies.—*R. Calabresi* (Rome).

4380. Bellinger, C. H. **Prognosis in schizophrenia—catatonic form.** *Psychiat. Quar.*, 1932, 6, 475-487.—Whereas the early writers on this subject concerned themselves chiefly with the etiology and clinical picture of this disorder of the mind, recent investigators have been more interested in obtaining complete case histories and carrying on extended contacts with patients who have been discharged from state hospitals. A résumé of nine cases is given. The results of the study bear out the conclusions of other students in this field, who are of the opinion that a considerable number of cases of schizophrenia of the catatonic type show an amelioration of their mental condition to the extent that they are able to resume their former places in society. A brief bibliography is given.—*E. T. Burr* (Vocational Adjustment Bureau).

4381. Bowman, K. M., & Raymond, A. F. **A statistical study of hallucinations in the manic-depressive psychoses.** *Amer. J. Psychiat.*, 1931, 11, 299-309.—The study was based on 1009 cases of manic-depressive psychosis, with 1408 schizophrenics and 496 general paretics as controls. Among the findings and conclusions are: hallucinations are notably more frequent in schizophrenia than in manic-depressive psychosis or general paresis. In both manic-depressive psychosis and in schizophrenia, auditory hallucinations are the most common type, with visual types next, and tactile, olfactory, gustatory, and somatic hallucinations rare, but found. Females experienced hallucinations in more cases than males, especially in the visual field. Significant association was found between pre-psychotic personality and incidence of hallucination; as also between delusions and hallucinations.—*S. J. Beck* (Boston Psychopathic Hospital).

4382. Brown, S., II. **Next steps in a mental health campaign.** *Psychiat. Quar.*, 1932, 6, 411-416.—*R. R. Willoughby* (Clark).

4383. Buscaino, V. M. **Catatonie sperimentale negli animali e nell'uomo.** (Experimental catatonia in animals and in man.) *Atti soc. ital. prog. sci.*, 1931, 2, 363-364.—There are certain substances of aminic structure which provoke the appearance of symptoms identical with those observed in dementia praecox and in parkinsonian post-encephalitis. The substances provoke the symptoms acting outside the cerebral cortex, and especially on the basal ganglia. These facts lean towards the theory of aminic pathogenesis of catatonic syndromes observed in dementia praecox and parkinsonian patients, a theory which is held by the author.—*R. Calabresi* (Rome).

4384. Cadwalader, W. B. **Diseases of the spinal cord.** Baltimore: Williams & Wilkins, 1932.—This book consists of 15 chapters, 72 illustrations and 328 references to literature. It treats and describes the

different aspects of the diseases that affect the spinal cord. Chapters I and II contain brief reviews of the neuron theory and descriptions of the effects of degeneration, as well as an outline of the anatomy of the spinal cord and of the arrangement of the conducting pathways. In Chapter III the reflexes and reflex action are described and an attempt has been made to correlate the physiologists' conceptions of reflex action in such a way as to permit ready application by clinicians to the interpretation of phenomena developing during the course of disease. Chapters IV and V are devoted to a discussion of the symptoms occurring in the presence of lesions involving tracts of known function, a knowledge of which forms the basis of topographical diagnoses. The remaining ten chapters treat of spinal cord disorders, each disease being described separately. Many of the illustrations are drawn from original sources. The main object in this book has been to present the more recent conceptions of the effects of diseases of the spinal cord in a concise, comprehensive and thorough manner and in a form that would appeal to students of medicine, general practitioners and surgeons. The general practitioner will find here suggestions as to treatment. At best our knowledge of this subject is more or less incomplete, but that which is required by the neurologist has in large measure been clearly set forth here.—(Publisher's abstract).

4385. Carlisle, C. L. **The significance of schizoid mechanisms in the manic-depressive syndrome.** *Med. Bull. Vet. Admin.*, 1932, 8, 93-98.—*R. R. Willoughby* (Clark).

4386. Claude, H., Lhermitte, J., & Baruk, H. **Pathologie de la pré-sénilité syndrome catatonique avec négativisme unilateral.** (The pathology of the catatonic pre-senility syndrome with unilateral negativism.) *Encéph.*, 1932, 27, 177-195.—Detailed description of a patient who shows clearly the association of a catatonic syndrome with a series of symptoms indicating an organic cerebral disorder: such as aphasia, disturbances of the pseudo-bulbar type, iterative movements, hypertonia. This patient presents, furthermore, disturbances of the vascular system and of general trophicity which seem to be related to the extension of the primitive process to the organo-vegetative centers of the brain. This man, in whom the traits of catatonia, negativism, catalepsy and aphasia are blended, was not syphilitic. He was an old alcoholic who had received a violent trauma of the cranium two years before the appearance of the first difficulties.—*Math. H. Piéron* (Sorbonne).

4387. Clivio, G. **Osservazioni sull'esame vestibolare nei malati nevroligici.** (Observations on the vestibular examination of neurological patients.) *Riv. oto-neur.-oftal.*, 1929, 6, 1-22.—After the examination of 250 patients, the author concluded that while there seems to be a constant relation between the lesion and the vestibular symptoms, this latter results only from a comparative complex of examinations, because the variations, although constant, are produced within very narrow limits, which in the par-

ticular case entered into the physiological table. The examination of vestibular function must be practised in neurological patients, but it is not enough to solve a diagnostic problem, especially concerning the seat of the malady.—*R. Calabresi* (Rome).

4388. Credner, L. **Phobie als Mittel.** (Phobias as means.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 117-122.—All phobias and obsessions are means of defense or escape for the neurotic patient. They are also adaptations transferred from childhood situations. Their meaning can be understood only when the experiences of the patient are revealed in the case history. The need for this form of adjustment must be removed for the patient. Faith cures, suggestion, and hypnosis only transfer the fears in such individuals from one symptom to another. Three illustrative cases are presented.—*O. N. de Weerdt* (Beloit).

4389. Darden, O. B. **Moral subnormality as an expression of mental unsoundness.** *Virginia Med. Mo.*, 1932, 58, 773-776.—*R. R. Willoughby* (Clark).

4390. Daseking, J. **Verlauf und Prognose der im Puerperium entstandenen Schizophrenien und schizophrenerartigen Erkrankungen.** (Course and prognosis of schizophrenias and schizoid illnesses arising from the puerperium.) Diesdorf: Rettungsanstalten, 1931. Pp. 40.—*R. R. Willoughby* (Clark).

4391. Davenport, D. W. S. **Les hommes de verre. Maladie de Apert.** (Men of glass. Apert's disease.) Thèse de med. de Paris, 1931. Pp. 98.—An observation of this rare hereditary and familial malady, which frequently shows accentuated auditory disorders.—*Math. H. Piéron* (Sorbonne).

4392. De Massary, J. **L'alexie.** (Alexia.) *Enceph.*, 1932, 27, 51-78; 134.—General review of the question, followed by a bibliography of about 100 works bearing on the subject.—*Math. H. Piéron* (Sorbonne).

4393. Deutsch, J. **Psychomotorische Erscheinungen im Verlaufe des manisch-depressiven Irreseins.** (Psychomotor manifestations in the course of the manic-depressive psychosis.) Greifswald: Adler, 1931. Pp. 44.—*R. R. Willoughby* (Clark).

4394. Divry, —, & Christophe, —. **Fugue consécutive à une électrocution.** (Fugue after electric shock.) *J. de neur. et de psychiat.*, 1931, 31, 302-308.—The case history of a man of 27, an engineer, who after a severe electric shock showed a certain degree of anterograde amnesia, severe headaches, and pains in arms and back. After a few days he fell into a state of depression with suicidal ideas, and finally went away and travelled about for 10 or 15 days. Returned home by the authorities, his condition gradually improved, but a partial amnesia relative to his flight persisted. Neurologically the electric shock had caused only sensory and no motor disturbances. The poromanie episode resembled a hysterical disorder and was characterized by a narrowing of consciousness upon the idea of going away somewhere to commit suicide.—*H. Sys* (New York).

4395. Dreikurs, R. **Zum Problem der Neurasthenie.** (Some aspects of the problem of neurasthenia.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 16-32.—Dreikurs supports a psychological basis in terms of social attitudes (*Lebensstil*) underlying neurasthenia as opposed to the physical explanation of "weakened nervous system." He seeks to show that in neuroses the objective difficulties, such as heightened reflexes, tremors, etc., and the apparently organic difficulties of variations in blood pressure, pulse, digestive disturbance, and all the different sex maladjustments, are in the nature of defense mechanisms to guard the subject from social discomfiture and defeat and hence are psychological consequences and not causes or concomitants of physical defects. Several cases are reported at length and analyzed.—*O. N. de Weerdt* (Beloit).

4396. Dreikurs, R. **Einige wirksame Faktoren in der Psychotherapie.** (Some effective factors in psychotherapy.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 161-176.—Building up the patient's self-confidence and helping him to understand his dominant social attitude (*Lebensstil*) are the deciding factors in individual-psychological therapy. Critical consideration is given to the use of self-understanding vs. rules of conduct dogmatically prescribed. The resource to "tricks" of technique in the treatment is also discussed, such as arousal of surprise, consternation, anti-suggestion (e.g., telling the patient who cannot sleep that it may be well in his condition to try and remain awake). A further discussion covers the nature and possible hindrances in treatment of the so-called erotic attachments of patients for the physician. Analytical criticism is leveled against the Freudian conceptions of these last points.—*O. N. de Weerdt* (Beloit).

4397. Drexler, H. **Strafbare Handlungen Geisteskranker.** (Punishable actions of the mentally ill.) Bonn: Trapp, 1931. Pp. 103.—*R. R. Willoughby* (Clark).

4398. East, W. N. **Mental defectiveness and alcohol and drug addiction.** *Brit. J. Inebriety*, 1932, 29, 149-168.—*R. R. Willoughby* (Clark).

4399. Eschbach, H. **Epilepsie und Migräne.** (Epilepsy and migraine.) Bonn: Trapp, 1927 (1931). Pp. 63.—*R. R. Willoughby* (Clark).

4400. Faugère, P. **A propos de quelques cas de séquelles neurologiques tardives chez les traumatismes crâno-cérébraux.** (Concerning some cases of delayed neurological sequelae in cranio-cerebral traumas.) Thèse de med. de Paris, 1931. Pp. 69.—*Math. H. Piéron* (Sorbonne).

4401. Faver, H. E. **A study of the personality in persons developing catatonic dementia praecox.** *Psychiat. Quar.*, 1932, 6, 500-503.—Of the 154 unselected cases of catatonic dementia praecox analyzed from the point of view of personality, seclusiveness was found to be the predominating characteristic. Irritability, described generally as fits of violent temper, constituted the third largest group in the

series. In this study environmental and hereditary factors were not stressed except where it was evident that they had either a direct bearing on the personality or exerted a marked influence on early development. No striking traits were found in 29 of the cases, yet although the behavior of this group approached normal, it did not conform truly to normal standards but was normal for the particular individual under consideration.—*E. T. Burr* (Vocational Adjustment Bureau).

4402. Flatau, G. *Unfälle-Neurosen.* (Accident neurosis.) *Abh. a. d. Geb. d. Psychotherap. u. med. Psychol.*, 1931, 15, 1-48; also Stuttgart: Enke, 1931.—*R. R. Willoughby* (Clark).

4403. Forsyth, D. The diagnosis of neurotic conditions in general practice. *Brit. Med. J.*, 1932, Feb., 370-374.—*R. R. Willoughby* (Clark).

4404. Gardner, G. E. The learning ability of schizophrenics. *Amer. J. Psychiat.*, 1931, 11, 247-252.—The school achievements of 100 patients diagnosed as schizophrenic were compared with those of 100 manic-depressives. The findings: before psychosis the learning ability of schizophrenics is inferior to that of manic-depressives before psychosis; those who become schizophrenic do not attain as high a school grade as do the future manic-depressives; the pre-schizophrenic manifest more evidence of special ability in art and music than do the pre-manic-depressives.—*S. J. Beck* (Boston Psychopathic Hospital).

4405. Gelb, A., Goldstein, K., & Siekmann, W. *Psychologische Analysen hirnpathologischer Fälle. XIV. Psychologische Analyse des Falles Rat . . . Ein Fall von sog. motorischer Aphasie.* (Psychological analyses of cases of brain injury. XIV. Psychological analysis of Rat . . . 's case, a case of so-called motor aphasia.) *Psychol. Forsch.*, 1932, 16, 201-250.—The patient Rat . . . , injured on his frontal convolutions, with motor disturbance and other disturbance of apparently related activities, is given a thorough psychological examination with regard to his speech, thought, intelligence, perception, affective life, etc. His general behavior is carefully studied, he is given certain intelligence tests, his arithmetical ability, speech, reading, writing, comprehension of spoken and picture stories, his orientation in space, etc., are tested. He is found to fail utterly in abstract situations even of the simplest nature; when they are made concrete and affect his personal life, he can accomplish a good deal. The conclusion is reached that such disturbances of so-called related activities are in reality not such at all, but what has taken place is a basic disturbance and alteration of the whole personality which shows itself typically in the total behavior.—*J. F. Brown* (Colorado).

4406. Guillain, G., & Bize, P. R. *Astéreognosie pure par lésion corticale pariétale traumatique.* (Pure astereognosia by traumatic parietal cortical lesion.) *Rev. neur.*, 1932, 39, 502-509.—Observation

of a case of astereognosia without any disturbance in peripheral sensibility, which had been caused by a lesion from a revolver bullet discharged into the right parietal region in an attempt at suicide on the part of a young girl of 21. It is known that astereognosia is the loss of the faculty of recognition of objects by touch, although disturbances of sensibility may be completely lacking. From the psycho-physiological point of view there is necessary for tactile identification: (1) the integrity of centripetal connections; (2) the integrity of the functions of primary identification (dimension, volume, relief, form, etc.); (3) the integrity of functions of secondary identification (mental representation of the object); (4) the integrity of symbolic functions (verbal denomination). In the case reported there is nothing wrong with peripheral sensibility: primary identity appears normal, symbolic identification does not seem disturbed, so the phenomena found must be related to a difficulty of synthesis of the mental representation of objects, a difficulty caused by the parietal cortical lesion.—*Math. H. Piéron* (Sorbonne).

4407. Haag, F. E. *Die geistige Gesundheit des Volkes und ihre Pflege.* (The mental health of the people and its care.) Munich: Lehmanns Verl., 1931. Pp. 255.—*R. R. Willoughby* (Clark).

4408. Helmer, R. D. Thought content in catatonic dementia praecox. *Psychiat. Quar.*, 1932, 6, 488-499.—The only bibliography which the writer finds that refers even remotely to this subject includes an article by Kirby in the 1913 *American Journal of Insanity*, *The Golden Bough*, by Frazier, and *Primitive Mentality*, by Lévy-Bruhl. The writer gives the thought content elicited from a male and a female patient, and in his summary emphasizes the fact that an understanding of the motives for the bizarre conduct of these patients is essential. He also suggests that one might be justified in administering such drugs as sodium amyta, carbon dioxide or oxygen during definite stupors in order to release their delusions and thus guide them to a better comprehension of their trends. This, he postulates, might shorten the course of the psychosis.—*E. T. Burr* (Vocational Adjustment Bureau).

4409. Hincks, C. M. Mental hygiene research. *Amer. J. Psychiat.*, 1931, 11, 237-246.—The world's need for and the aims of mental hygiene are noted, and the prospect of success in mental hygiene is predicated on its utilization of scientific method. The contributions of the four principal sciences employed in mental hygiene are discussed. They are: psychiatry, psychology, psychoanalysis, and sociology. Differences between outlooks and methods of the disciplines, especially psychiatry and psychology, are pointed out.—*S. J. Beck* (Boston Psychopathic Hospital).

4410. Hinsie, L. E., & Blalock, J. R. Treatment of general paralysis. Results in 197 cases treated from 1923-1926. *Amer. J. Psychiat.*, 1931, 11, 541-557.—As to clinical results and reaction types, the findings indicate the highest remission rate among

patients classified as "expansive," and the lowest among the schizophrenic. Deaths occurred in greatest number among the manics.—*S. J. Beck* (Boston Psychopathic Hospital).

4411. *Hinsie, L. E.* The catatonic syndrome in dementia praecox. *Psychiat. Quar.*, 1932, 6, 457-468.—The author presents a summary of the observations of several participants in the symposium on this subject held at the New York State Psychiatric Institute and at the Utica State Hospital during April, 1932. The clinical cases included in the symposium met certain definite uniform requirements. Careful observations of the pre-psychotic personality reactions of those individuals who later developed the catatonic form of dementia praecox were made. From these observations it was concluded that among those who develop the catatonic form of dementia praecox, a number of patients adjusted themselves to a relatively satisfactory level before there were any symptoms of a psychotic character. The statement is also made that as one studies a large series of patients a fairly large proportion of them are found to gain and to maintain a so-called adequate type of adjustment, quite apart, as far as is known at the present time, from the nature of the onset, the duration of symptoms, or the depth of regression. A list of the papers read at the symposium and their authors is given.—*E. T. Burr* (Vocational Adjustment Bureau).

4412. *Hinsie, L. E.* Clinical manifestations of the catatonic form of dementia praecox. *Psychiat. Quar.*, 1932, 6, 469-474.—The author describes the signs and symptoms of the well-defined case of catatonic dementia praecox. Thus the stupor, muscular rigidity, gait, suggestibility, alternating states, excitement and stereotypy are in turn defined. The general mental condition and the forms of behavior frequently encountered in such cases are described in some detail. There are several quotations from Kirby and Kraepelin.—*E. T. Burr* (Vocational Adjustment Bureau).

4413. *Holub, A.* Individualpsychologische Gedankengänge in der somatischen Medizin. (Individual-psychological conceptions in somatic medicine.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 89-94.—Holub cites articles by medical authorities attacking the scientific basis for the assumption of the reflex as the unit of behavior and the adequacy of the physical stimulus and response scheme as an explanation of behavior; he also finds a new emphasis by the physicians on over-compensation and teleological action as opposed to reaction in explaining symptoms. All these are claimed as individual-psychological concepts now finding support in other scientific fields.—*O. N. de Weerdt* (Beloit).

4414. *Horvat, A.* Naturwissenschaft und Individual-psychologie. (Natural sciences and individual-psychology.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 94-101.—Horvat attacks a position taken by Wexberg (*Int. Zsch. f. Indiv.-psychol.*, 1931), who presented an explanation of neuroses as based on

two final causal factors and their relationships: a "parabolic" (dynamie affect?) and an organic factor. Horvat objects to the organic factor as an ultimate cause, since accidents involving physical injuries are seldom productive of neuroses. Further, when inherent or acquired organ inferiorities are involved in neuroses, this influence is not directly causal, but dependent on the social attitudes (*Lebensstil*) of the patient. Organ inferiorities become factors in neuroses only when they have been consciously observed by the patient.—*O. N. de Weerdt* (Beloit).

4415. *Hoven, H.* Sur l'examen anatomo- et histopathologique des psychoses. (On the anatomic and histopathologic examination of the psychoses.) *J. de neur. et de psychiat.*, 1931, 31, 287-301.—The author stresses the necessity for establishing in Belgium a greater number of university clinics for psychiatry which would offer to the medical student full facilities for autopsies and histological investigations. Such examinations would help to clear up many doubtful psychopathological cases. A number of case histories of paretic, schizophrenic and encephalitic patients are cited in which valuable information was obtained through autopsy.—*H. Syz* (New York).

4416. *Janet, P.* L'hallucination dans le délire de persécution. (Hallucination in the delusion of persecution.) *Rev. phil.*, 1932, 57, 61-98; 279-331.—*Math. H. Piéron* (Sorbonne).

4417. *Jerrell, P. M.* Hereditary factors in schizophrenia: comparison of data. *Med. Bull. Vet. Admin.*, 1932, 8, 287-290.—*R. R. Willoughby* (Clark).

4418. *Kelman, H.* Observations in catatonia with mixtures of carbon dioxide and oxygen. *Psychiat. Quar.*, 1932, 6, 513-523.—This is a report of an investigation of the effect of the administration of mixtures of carbon dioxide and oxygen at regular intervals over a prolonged period. Only catatonic patients who were in good physical condition were selected. In the series of cases reviewed there were several patients who had been psychotic for a long time. Their reaction to this treatment is given in some detail. The remarkable constancy of the reaction which all patients exhibited to the inhalations is especially emphasized. It was found that a thorough knowledge of the psychosis, as well as of the patient's previous life, was essential. The author admits that many of the inferences which he has drawn are deduced from rather meager data, and adds that all patients showed some improvement following treatment and regressed when it was omitted. From a research point of view, much can be learned by this method concerning the mental mechanisms of patients in stupors.—*E. T. Burr* (Vocational Adjustment Bureau).

4419. *Komora, P. O.* The depression and mental health. *Better Times*, 1932, 13, 14-23.—*R. R. Willoughby* (Clark).

4420. *Kronfeld, A.* Neurosenwahl. Gestaltungsfaktoren neurotischer Symptome. (Choice of neu-

roses. Factors in the formation of neurotic symptoms.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 81-87.—Discussion of the problem why those suffering from nervousness express it variously in indigestion, asthma, disturbances of potency, or in terms of psychic anomalies such as compulsions, etc. The symptoms are always the recognizable manifestations of an assumed physical defect, the existence of which in turn offers a defensive explanation for the neurotic for his failure to achieve his self-determined goal.—*O. N. de Weerdt* (Beloit).

4421. Lange, J. **Gegenseitige Beeinflussung von Krankheiten vom Standpunkt des Psychiaters.** (Mutual influence of illnesses from the standpoint of the psychiatrist.) *Dtsch. Med. Woch.*, 1932, 11, 399-401.—The effect of endogenous mental disturbances on paralysis, the relation between tubercular treatment and schizophrenia, the healing of endogenous mental diseases under the influence of acute infection (pneumonia, erysipelas), and the malarial treatment of paresis are mentioned among other examples of the mutual influence of various illnesses.—*E. H. Kemp* (Clark).

4422. Lenzberg, K. **Über Konfliktneurosen.** (Concerning conflict neuroses.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 112-116.—The author presents the thesis that all neuroses are based on conflict. The various typical and more commonly experienced conflicts are analyzed and arranged in a logical scheme. The point is emphasized throughout that conflict is unavoidable in group life and forms an inevitable factor in personality development. The experiences of conflict cannot be characterized as always pathological. The correction of conflict-neuroses involves the gracious acceptance of the necessary limitations of being a person, the sacrifice of lesser values for the higher, i.e., the selfishly directed interests in absolute self-dependence and perfection (*Gottähnlichkeitsziel*) must be replaced by the love for and confidence in social good will.—*O. N. de Weerdt* (Beloit).

4423. Levin, M. **The basic symptoms of schizophrenia.** *Amer. J. Psychiat.*, 1931, 11, 215-236.—Observations of Bleuler's "basic" symptoms of schizophrenia were studied in 14 patients. Bleuler's views are presented. Case histories of patients studied are summarized. The author finds that differentiation between the pathological and non-pathological in association disturbances of schizophrenic or "potentially schizophrenic" children "must rest largely on guess-work." Certain differences are found between the mistaken associations of schizophrenies and those of the mentally retarded.—*S. J. Beck* (Boston Psychopathic Hospital).

4424. Lewis, N. D. C., & Blanchard, E. **Clinical findings in "recovered" cases of schizophrenia.** *Amer. J. Psychiat.*, 1931, 11, 481-492.—Findings are reported in 100 cases of schizophrenia that were discharged as recovered. Satisfactory economic pre-psychotic adjustment was found in only 26% of the cases; sexual adjustment was poor, and difficulties in

heterosexual relationships were avoided by the substitution of other activities in numerous instances. The incidence of the various more malignant symptoms is reported. "Neither the schizophrenic nor any other mental reaction for that matter can be understood excepting by means of a longitudinal study of its entire history and setting."—*S. J. Beck* (Boston Psychopathic Hospital).

4425. Lhermitte, J., Levy, G., & Treilles, J. **L'hallucinose pédonculaire.** (Peduncular hallucinosis.) *Rev. neur.*, 1932, 39, 382-388.—A case of a disease which, following a prolonged intoxication by various narcotics, was accompanied by troubles of vision characterized by a paralysis of the third pair of nerves. Some days after the regression of the ocular phenomena, which were accompanied by psychic disorders, the subject presented a singular phenomenon of crepuscular imagery—everything which surrounded him seemed new and transformed. The patient having succumbed to pneumonia, an autopsy was made; it showed alterations of the peduncular cavity with associated metachromatic degeneration. An alteration of the ventral nucleus of the third pair and of the median intermediate nucleus was found. It is interesting to see that the state of hallucinosis was realized at the same time as the alteration of the peduncle.—*Math. H. Piéron* (Sorbonne).

4426. Lowenberg, K., & Rothschild, D. **Alzheimer's disease.** Its occurrence on the basis of a variety of etiologic factors. *Amer. J. Psychiat.*, 1931, 11, 269-287.—From observations on two cases of Alzheimer's disease, the authors conclude that this disorder "is really a syndrome with a multiplicity of etiologic factors," and a small group of these cases is "clearly independent of senility or allied conditions."—*S. J. Beck* (Boston Psychopathic Hospital).

4427. MacKinnon, A. L. **Manic-depressive psychoses.** *Canadian Nurse*, 1932, 28, 181-185.—*R. R. Willoughby* (Clark).

4428. Malamud, W., & Miller, W. R. **Psychotherapy in the schizophrenias.** *Amer. J. Psychiat.*, 1931, 11, 457-480.—There are three points upon which opponents and proponents of psychotherapy in the schizophrenias have based their acceptance or rejection of it. These are: (1) degree of success expected, (2) the physiogenic vs. psychogenic controversy, (3) the definition of schizophrenia; and they are analyzed. The authors state that in the treatment procedure the emphasis "will have to be placed upon getting the patient to grasp intellectually the mechanism of development of his disease, and for that purpose too we will have to secure the patient's desire to do so." The steps in the procedure are outlined, and case histories cited. Success varied in degree with various patients. Tentative conclusions are that among factors important in determining success of the treatment are: (1) stage of the psychosis; (2) amount of emotional rapport with patient; (3) patient's own attempts at reconstruction; (4) a certain degree of intelligence.—*S. J. Beck* (Boston Psychopathic Hospital).

4429. May, J. V. The dementia praecox-schizophrenia problem. *Amer. J. Psychiat.*, 1931, 11, 401-446.—The literature on dementia praecox and the schizophrenias from Morel to present-day writers is reviewed in detail. The disease and its characteristics are described in a lengthy summary. An extensive bibliography is presented.—S. J. Beck (Boston Psychopathic Hospital).
4430. McGibbon, A. K. Mental hygiene and psychiatric nursing. *Amer. J. Nursing*, 1932, 32, 269-275.—R. R. Willoughby (Clark).
4431. McLester, J. S. Emotional instability as a frequent cause of digestive disorders. *Southern Med. J.*, 1932, 25, 500-502.—R. R. Willoughby (Clark).
4432. McLin, T. G. Schizoid and syntoid personality reactions. *U. S. Vet. Bur. Med. Bull.*, 1931, 7, 748-751.—The schizoid type is described as having a "shut-in" personality, with a tendency to seclusiveness, diffidence, shyness and withdrawal from associations, together with inability to discuss personal affairs, or conditions in general. Reactions of this type were found in a very large percentage of the cases admitted to institutions for the care of mental diseases, and most of these cases belonged to the dementia praecox group. The syntoid type, on the other hand, is described as belonging to the group having free and easy associations and emotional contact with other individuals and with an innate disposition for moodiness which oscillates between elation and melancholy, the exaggeration of which is shown in the manic-depressive psychoses. Constitutional factors associated with schizoid and syntoid personality reactions are also discussed.—J. C. Kurtz (Washington, D. C.).
4433. Oliviers, —. Contribution à l'étude de l'exhibitionisme. (Contribution to the study of exhibitionism.) *J. de neur. et de psychiat.*, 1931, 31, 321-334.—The author suggests a classification in four groups: (1) Exhibitionism in imbeciles and mentally deficient persons; (2) exhibitionism as an automatic act in epileptics; (3) exhibitionism in chronic alcoholism; (4) exhibitionism on the basis of other mental disorders. He discusses these four groups in detail, giving some examples, case histories and statistics.—H. Sys (New York).
4434. Pascal, C., & Deschamps, A. Exploration pharmacodynamique de la motricité des déments précoce. (Pharmacodynamic exploration of the motility of those afflicted with dementia praecox.) *Encéph.*, 1932, 27, 1-26.—A study of 132 patients, from whom the following conclusions are derived: there are no hebephrenic and paranoid dementias without catatonia, and there is no plain catatonia; psycho-sensory troubles always accompany motor disorders, and catatonia marks the border of dementia praecox and is identified with it. On these patients two sorts of tests were tried: (1) combination tests (ether-cocaine, ether-cocaine-caffeine-strichnine, cocaine in progressive doses associated with ether, and the same associated with caffeine-strichnine); (2) simple tests (hashish, peyotl, protoxide of nitrogen). These pharmaceutic agents have shown sometimes neural and sometimes psychic changes; they have brought about veritable processes of dissection, either following the natural orientations of dementia praecox or creating new means. On the other hand, the exploration of motility has furnished interesting data; in almost all cases the pharmacodynamic tests have overcome the autism and eliminated the motor blocking. The great screen which interposes itself between the patient and the environment is only a motor phenomenon which is related to the psychic blocking; the conflict is transformed into harmony each time that there is a pharmacodynamic excitation, and the end of this leads to a return of conflict. These experiments show that we must rid ourselves of the notion of psychomotor automatism. The voluntary word is no more an individualized function, but a mode of behavior which recapitulates the sum of mental energy with all the bio-mental tendencies; each time that the activity which we call "voluntary" decides and executes, there is the intervention of motor mechanisms prepared by heredity (simple reflexes) and by habituation (conditioned reflexes). The psychic coefficient is everywhere, whether there is a morbid motor phenomenon or a natural phenomenon concerned; it is always necessary to take account of the level of efficiency and the psychic fringe.—Math. H. Piéron (Sorbonne).
4435. Patry, F. L. Legislative aspects of mental hygiene. *Psychiat. Quar.*, 1932, 6, 529-534.—The following important mental hygiene projects which should be promoted by legislation were presented by the writer in an address to the New York League of Women Voters: (1) extension of child guidance work; (2) provision for observation wards for mentally ill patients in general hospitals; (3) establishment of more psychopathic hospitals; (4) appointment of psychiatrists to public health and social welfare departments; (5) establishment of dispensaries or out-patient departments for psychiatric service in connection with general hospitals and psychopathic hospitals; (6) psychiatric examination of public officials in whom reposes responsibility for the safety of human life; (7) measures to diminish, and eliminate where possible, unnecessary noise; (8) appointment of psychiatrists on the staff of all correctional institutions and those concerned with delinquency and mentally abnormal individuals; (9) appointment of consulting psychiatrists to all juvenile courts and criminal courts. Finally, Patry asks (10) provision for the appointment by the state of an impartial board of qualified psychiatric experts to examine and report on the criminal responsibility of all persons for whom an insanity plea is made or in whom there is evidence of mental disease or defect, as has been the practice in Massachusetts.—E. T. Burr (Vocational Adjustment Bureau).
4436. Pavlov, I. P. [An essay on the physiological conception of the symptomatology of hys-

teria.] Leningrad: Academy of Science, U.S.S.R., 1932. Pp. 36.—Part I briefly discusses the theory of conditioned reflexes. The author then describes hysteria as a weakness of the nervous system, especially the higher sections of the nervous system, the hemispheres. When their influence is removed, a chaotic activity of the subcortical regions ensues. Hysterical persons, through the inhibition of the cortex by too intense stimulation or through the weakness of the cortex, show various affective outbreaks, or convulsive fits. If the inhibition spreads over the whole brain, there ensues a passive state of the hysterical organism, hypnosis, and a complete sleep (lethargy). These states are determined by the strength of the relations between the cortex and subcortical regions. Is hysteria curable? Substantial alteration of the type is impossible, but training of the hemispheres is possible, and even very feeble nervous systems can be improved under the influence of a special "hothouse" atmosphere.—A. Yarmolenko (Leningrad).

4437. Pavlov, J. P. *Essai de digression d'un physiologiste dans le domaine de la psychiatrie.* (Essay on the digression of a physiologist into the field of psychiatry.) *Arch. int. de pharmacodynamie*, 1930, 38, 222-227.—Pavlov has come to the conclusion that the symptoms usually regarded as characteristic of schizophrenia are only the manifestation of a chronic hypnotic state. The phenomena of aphasia, immobility, stupefaction, echolalia, echo-praxia, negativism, stereotypism, and catatonia are all declared to be quite usual in hypnosis, and the case of five-year sleep described by Janet and of twenty-year sleep described by St. Petersburg (these cases might better be called cases of hypnosis) offer evidence of the fact that a state of hypnosis may endure for long periods of time. Inhibition, playing the rôle of protector of the cells of the cerebral hemispheres from the strain of excessively strong excitation, is suggested as the physiological mechanism of schizophrenia.—E. H. Kemp (Clark).

4438. Peters, E. *The nursing care of manic-depressive insanity.* *Canadian Nurse*, 1932, 28, 185-187.—R. R. Willoughby (Clark).

4439. Pierantoni, L., & Rizzati, E. *Traumi del cranio ed esiti delle lesioni labirintiche. Saggio critico con considerazioni medico-legali.* (Head injuries and consequences of labyrinthine lesions. Critical essay with clinical and medico-legal considerations.) *Ateneo Parmense*, 1929, 1, 1-114.—The authors made a systematic oto-neurological study of 47 subjects, victims of head injuries, observing them systematically from a few days after the accident until two years later, in order to note all the acoustic, labyrinthine, neurobiological, and psychic alterations, together with their length and clinical and medico-legal significance. The problem of labyrinthine trauma is considered in its important practical aspects: lines of fractures of the petrous bone; clinical groupings, modes of examination, and criteria for evaluating the extent of injury. Problems which

demand the collaboration of neurology and otology are examined in detail; differential diagnosis of particular forms of vertigo and the association of labyrinthine and cerebral lesions are discussed.—R. Calabresi (Rome).

4440. Pillsbury, W. B. *An elementary psychology of the abnormal.* New York: McGraw-Hill, 1932. Pp. x + 375. \$3.00.—A concise statement of the facts and theories of abnormalities. The abnormalities may be characterized by deficiency or distortion. The former are feeble-mindedness, and the latter are divided into two groups, the neuroses and the psychoses. The neuroses and the psychoses are then divided into special groups and each of these considered.—E. B. Heim (Provo, Utah).

4441. Pinard, M. *L'héredo-syphilis mentale.* (Mental hereditary syphilis.) *Paris méd.*, 1932, 22, 205-206.—The mental manifestations of hereditary syphilis may run from the slightest to the most serious; the author gives examples of cases of bad temper leading almost to crime in inattentive, jealous, kleptomaniac, and flighty children, who have been completely cured following an anti-syphilitic treatment, the syphilis of the mother having been recognized.—Math. H. Piéron (Sorbonne).

4442. Pollock, H. M. *Recurrence of attacks in manic-depressive psychoses.* *Amer. J. Psychiat.*, 1931, 11, 567-574.—From statistical records for over 8,000 manic-depressive cases in the files of the New York State Department of Mental Hygiene, findings are elicited showing that in more than half the cases there is no recurrence sufficiently severe to cause readmission to a mental hospital; frequency of recurrence is about the same in the sexes; recurrences are fewer between the ages of 20 and 40 than above and below these ages; for recovered cases the average duration of attack is a little more than a year.—S. J. Beck (Boston Psychopathic Hospital).

4443. Pollock, H. M. *A state research program in mental hygiene.* *Psychiat. Quar.*, 1932, 6, 417-420.—R. R. Willoughby (Clark).

4444. Pollock, H. M., & Mack, G. M. *Statistical review of occupational therapy in the New York civil state hospitals for the fiscal year ended June 30, 1931.* *Psychiat. Quar.*, 1932, 6, 535-547.—R. R. Willoughby (Clark).

4445. Roeling, G. F. *The problem of psychopathic personality.* *New Orleans Med. & Surg. J.*, 1932, 84, 693-698.—R. R. Willoughby (Clark).

4446. Rosanoff, A. J. *Sex-linked inheritance in mental deficiency.* *Amer. J. Psychiat.*, 1931, 11, 289-297.—Certain findings, obtained in an investigation of mental disorder in twins, were further studied, and the following conclusions drawn: mental deficiency is more common in the male than in the female, and most strikingly so in opposite-sex twins; thus, "there may be a sex-linked factor in some cases in the genetic history of mental deficiency and general intelligence"; it was found necessary to assume 6

possible types of males, 9 of females, and 54 types of mating, and from 38 of these, theoretically, only normal children can be expected. From 8 of the other types of mating the mentally deficient offspring may be expected to be equally distributed between the sexes, and from the remaining 8 types, "only male mentally deficient offspring can result."—*S. J. Beck* (Boston Psychopathic Hospital).

4447. *Saunders, E. B.* A study of depressions in late life with special reference to content. *Amer. J. Psychiat.*, 1932, 11, 925-948.—*R. R. Willoughby* (Clark).

4448. *Saunders, E. B.* Mental reactions associated with the menopause. *Southern Med. J.*, 1932, 25, 266-270.—*R. R. Willoughby* (Clark).

4449. *Schliephacke, B. P.* Farbe und Heilweise. (Color and therapy.) Gettenbach: Lebenweiser-Verlag, 1931. Pp. 28.—*R. R. Willoughby* (Clark).

4450. *Seif, L.* Zur Problematik der Psycho- und Somatotherapie der Neurosen. (The problem of psycho- and somatic therapy in neuroses.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 106-107.—The central problem in neuroses for the individual-psychologist is the motivation of the individual in childhood training and in corrective treatment to meet his required life adjustments courageously. The motivation is based on and justified by the principle of the unity of mind and body in an individual. All physical and chemical medical treatments must therefore be considered, and become "reasonable" in the light of their effect on the total personality.—*O. N. de Weerdt* (Beloit).

4451. *Spiel, O.* Änderung des Lebensstiles—Begabungswandel. (Change in pattern of life and in capacity.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 183-200.—A detailed case record of the corrective treatment of a case of school failure.—*O. N. de Weerdt* (Beloit).

4452. *Sullivan, H. S.* The modified psychoanalytic treatment of schizophrenia. *Amer. J. Psychiat.*, 1931, 11, 519-540.—Psychotherapy in schizophrenia is discussed, and among the author's conclusions are: (1) "the therapeutic situations must be integrated between individuals of the same sex"; (2) the unanalyzed psychiatrist and the too recently analyzed one "are in general not to be considered for this work"; (3) the philosophically minded individual is "a poor candidate" as a therapist in schizophrenia; (4) various other personality types are listed which the author considers unfit for therapeutic work among schizophrenics.—*S. J. Beck* (Boston Psychopathic Hospital).

4453. *Testu, C.* Essai psycho-pathologique sur Villiers de l'Isle Adam. (Psychopathological essay on Villiers de l'Isle Adam.) Thèse de med. de Paris, 1931. Pp. 190.—The author places his brilliant patient in the class of the schizoids, with a touch of mythomania and of paranoia. He finds, in effect, a clear preponderance of artistic thought over realistic

thought, a discordance between intellectual activity and pragmatic activity, contrasts of affective hyperesthesia and anesthesia, and finally an inadaptability and impossibility of permanent contact with the external world.—*Math. H. Piéron* (Sorbonne).

4454. *Underwood, G. M.* Emotional and psychic factors in the production of gastro-intestinal diseases. *Texas State J. Med.*, 1932, 27, 798-800.—*R. R. Willoughby* (Clark).

4455. *Wexberg, E.* Neurosenwahl. (Choice of neuroses.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 88-105.—An attack on a problem of current interest to individual-psychology, that of the psychosomatic relationship. Wexberg opposes the Adlerian attitude that all neuroses are fully explicable only teleologically. In the present article he presents the idea that a variably unstable sympathetic nervous system which is always susceptible to psychic stimulation forms the somatic basis for neuroses. When a "parabulua" (wrongly directed will) becomes effective in arousing mental disturbances, it may become at the same time affectively dynamic through the momentarily unstable sympathetic nervous system. The S.N.S. thus becomes the connecting link between the somatic symptoms of neuroses, such as disturbances of heart action, tremors, fainting, etc., and the psychic phenomena. When the relationships between the psychic condition and the possible physical symptoms have been adequately traced on this basis, the teleological explanations for neurotic symptoms (Adler: the symptoms serve a purpose for the patient in controlling associates) and the accepted scientific causal explanations (unbroken chain of physical events) become equally applicable. Applications of the principle are made to sleeplessness, exhaustion from overwork, fear neuroses, etc. Conclusion: individual-psychology, to be consistent, must acknowledge the lack in its system of an approach for dealing with the problems of the pathogenesis of neuroses.—*O. N. de Weerdt* (Beloit).

4456. *Wildermuth, H.* Schizophrenie von innen. (Schizophrenia from within.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1932, 139, 52-74.—The author thinks that the outer symptoms of schizophrenia have been much studied, while the inner processes of the psychosis have been left almost untouched. The diaries of several patients are used as subject matter by the author.—*E. H. Kemp* (Clark).

4457. *Wolff, S. C.* Thought content in catatonic dementia praecox. *Psychiat. Quar.*, 1932, 6, 504-512.—This study is based upon the case records of 100 patients, most of them admitted to the Hudson River State Hospital from 1927 to 1931, all of them having been finally and definitely diagnosed as dementia praecox, catatonic. The thought content was determined on the basis of observations made prior to admission, as well as upon its expression during residence in the hospital. The ideas recorded were arranged according to the frequency of their occurrence. In reviewing these records, the writer was impressed with the prominence of ideas relative to

perverse and tabooed sexuality, also the frequency of ideas of death and related ideas of rebirth, and finally the frequency of the association of fear with these ideas. The latter offers an interesting field for speculation. Considered as a psychobiological reaction, the attitude and manifestations of catatonia suggest a feigned death reaction to fear, an inferior type of response. The writer suggests that the mental picture presents a similar mechanism, a resort to death as a solution of difficulties, an escape to a blissful state of freedom from cares in which tabooed longings are no longer a source of conflict.—E. T. Burr (Vocational Adjustment Bureau).

4458. Zannis, E. P. Z. *Héréd-syphilis et troubles psychiques de l'enfance.* (Inherited syphilis and mental disorders in childhood.) Thèse de med. de Paris, 1931. Pp. 210.—The psychic disorders due to inherited syphilis may perhaps be intellectual: mental retardation, debility, idioey, imbecility, or perhaps disorders of character.—*Math. H. Piéron* (Sorbonne).

4459. Zilboorg, G. *The deeper layers of schizophrenic psychoses.* *Amer. J. Psychiat.*, 1931, 11, 493-511.—The author's considerations "are based on no traditional preconceived views; neither the purely phenomenological psychiatric, nor the traditional psychoanalytic attitude towards psychoses is here followed blindly. The clinical therapeutic path is taken instead." Excerpts are cited from case histories. The author's conclusion is "that schizophrenia, despite its mysterious, even fatal nature, is but a link in a bio-psychological chain. It would appear that it is not an irreversible process and that further therapeutic studies might throw more light on the problem of the transmutability of psychopathological reactions."—S. J. Beck (Boston Psychopathic Hospital).

[See also abstracts 4288, 4341, 4465, 4470, 4494, 4532, 4541, 4548, 4551, 4559, 4598.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

4460. Bauer, J. R. H. *Research in art appreciation.* *School & Soc.*, 1932, 36, 119-121.—The program of the University of Oregon.—H. L. Koch (Chicago).

4461. Benedek, L. *A pszichológia jelentőségről.* (Concerning the meaning of psychology.) *Magyar Psychologai Szemle*, 1931, 4, 3-16.—The author speaks of the significance of psychology in practical science, and estimates its value from the standpoint of practical human knowledge and adjudication. In certain cases of recognized vis compulsiva the normal psychological determinants of a deed must be determined. The author points out the significance of genetic psychology in this connection and discusses the mutual relations of psychology and psychiatry.—E. H. Kemp (Clark).

4462. Bragman, L. J. *The case of Ludwig Lewisohn. A contribution to the psychology of creative genius.* *Amer. J. Psychiat.*, 1931, 11, 319-331.—Ci-

tations from Lewisohn's writings are analyzed and discussed in the light of events in his life. The conclusion: "So, fed by sources deep within his subconsciousness, he escapes the fate of a neurosis through the expressive medium of his creative genius."—S. J. Beck (Boston Psychopathic Hospital).

4463. Burkey, R. E. *A statistical study of the sequence of successive delinquencies.* *J. Juv. Res.*, 1932, 16, 133-144.—The question considered is the sequence of delinquencies in the case of 198 boys all of whom had reached the age of 21 but previous to attaining this age had been committed to the Bureau of Juvenile Research in Ohio. About half of the boys were normal in intellect, half subnormal. Those of normal intellect began their delinquencies relatively more frequently by stealing than those who were subnormal, whereas the reverse obtained for sex delinquencies. Truancy was equally characteristic of the two intelligence groups. Those whose initial contact with the court was on the basis of charges of stealing tended to continue in this practice rather than to turn to other types of misdeeds. The normals who began with truancy or incorrigibility tended to slip readily into stealing, although they tended also to continue as truants or incorrigibles. The subnormal truant was the least likely of the types to offend by stealing, but seemed to persist stubbornly in his truancy. The subnormal incorrigible was not so apt to begin stealing as to continue to be incorrigible. There seem to have been few differences between the social backgrounds of the casual offenders and recidivists or between those of the normals and subnormals.—H. L. Koch (Chicago).

4464. Cantor, N. F. *Crime, criminals and criminal justice.* New York: Holt, 1932. Pp. xvii + 470. \$3.50.—A critical survey of the current body of theory and practice in criminology and penology. It attempts to sketch some of the historical and sociological backgrounds of important legal concepts respecting the classification and treatment of the criminal, as well as to give an estimate of various modern legal, psychological and sociological approaches to the problems involved. There are sections on the Nature of Crime, the Criminal, Factors in Crime Careers, and Administration of Criminal Justice. The latter includes a detailed treatment of the various techniques of present-day criminal procedure. The chapters on Penology deal with historical backgrounds, systems of prison administration, probation, and the more recent contributions of psychology and psychiatry to the "New Penology." A brief account of the penal system of the Soviet Union appears in the appendix.—C. Lerner (Worcester, Mass.).

4465. Carmichael, A. M. *The relation of maladjustment to behavior.* *Indiana Bull. Charities & Corrections*, 1932, April, 227-232.—R. R. Willoughby (Clark).

4466. Easley, E. *A comparison of the vibrato in concert and opera singing.* In *The Vibrato. Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1. Pp. 269-275.—There is a tendency for artists to use wider and

faster vibratos in opera songs than in concert songs. The average vibrato in opera songs sung by opera singers is significantly wider and faster than the vibrato in concert songs sung by the same opera singers.—*B. Wellman* (Iowa).

4467. Eddinger, F. *Bemerkungen über Takt, Höflichkeit, Güte und soziale Betätigung.* (Remarks on tact, politeness, goodness and social activity.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 136-137.—Characterization of the behavior and attitudes of individuals in the expression of the traits mentioned.—*O. N. de Weerdt* (Beloit).

4468. Eulenberg, F. *Phantasie und Wille des wirtschaftenden Menschen.* (Fantasy and will of the economic man.) *Tübingen*: Mohr, 1931. Pp. 47.—*R. R. Willoughby* (Clark).

4469. Fleisch, H. *Essai de psychologie linguistique.* (Essay on linguistic psychology.) *Rev. de phil.*, 1931, 31, 623-642; 1932, 32, 147-184.—Essay on the synthesis of theories of oral style and the problems which these theories present, especially the theory of P. Jousse, which the author declares sufficiently proved by its coherence and which appears to be able to explain all the facts.—*Math. H. Piéron* (Sorbonne).

4470. Glick, F. Z. *A psychiatric unit at Pontiac State Reformatory.* *Ment. Health Bull.*, 1932, 10, 2-3.—*R. R. Willoughby* (Clark).

4471. Gusinde, M. *Die Feuerland Indianer.* Bd. 1. *Die Selk' Nam. Vom Leben und Denken eines Jägervolkes auf der Grossen Feuerlandinsel.* (The Indians of Tierra del Fuego. I. The Selk' Nam; the life and thought of a hunting people on the large island of Tierra del Fuego.) Mödling b. Wien: Anthropos, 1931. Pp. 1176.—*R. R. Willoughby* (Clark).

4472. Haeutler, A. *Idiotie. (Idiocy.)* *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 33-39.—A philosophic discussion of some of the classical Grecian conceptions of factors and the whole, differences and unity, with causal applications to the relativity of the concepts of individual and society.—*O. N. de Weerdt* (Beloit).

4473. Harms, E. *Die seelische Struktur des religiösen Menschen.* (The mental structure of the religious person.) *Zsch. f. Religionspsychol.*, 1931.—The author attempts to deal with religion in the light of recent psychology. He is particularly concerned with the ego and its place in religious life. The entire article is philosophical in tone.—*D. S. Oberlin* (Bryn Mawr).

4474. Hattwick, M. *The vibrato in wind instruments.* In *The Vibrato. Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1. Pp. 276-280.—The pitch vibrato was present approximately 18% of the time in the fourteen sections studied of phonograph records of wind instruments playing classics. The vibrato was present to a greater extent in modern jazz music than in the classics.—*B. Wellman* (Iowa).

4475. Häutler, A. *Religiöse Menschlichkeit.* (Religious humanity.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 127-136.—A Goethe oration offering the suggestion that the young pre-classical Goethe, who produced Goetz, Urfauft (the original Faust), etc., offers for the present age a more appealing view of social and personal life than does the Goethe of Iphigenie, Tasso, and the final Faust.—*O. N. de Weerdt* (Beloit).

4476. Heymann, R. *Das Verbrechen. Bd. 1. Sexualverbrecher.* (Crime. I. Sex criminals.) Leipzig: Lykeion, 1931. Pp. 326.—*R. R. Willoughby* (Clark).

4477. Hollinshead, M. T. *A study of the vibrato in artistic violin playing.* In *The Vibrato. Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1, 281-288.—The average rate of the vibrato in artistic violin playing is approximately seven cycles per second, the same as in artistic singing. In rate, the artistic violin and vocal vibrato are about equally variable. In extent the violin vibrato is greater but less variable.—*B. Wellman* (Iowa).

4478. Holt, E. K. *Some observations on crime and criminal behavior.* *Bull. Mass. Dept. Ment. Dis.*, 1931, 15, 20-36.—*R. R. Willoughby* (Clark).

4479. Johnson, W. *The influence of stuttering on the personality.* *Univ. Iowa Stud.: Stud. Child Welfare*, 1932, 5, No. 5. Pp. 140.—The influence of stuttering upon the adaptations and attitudes of the stutterer was investigated by means of case studies, featuring case histories, speech clinic examinations, autobiographies, personal documents (introspections and retrospections), questionnaires, the Woodworth-House mental hygiene inventory, personal interviews and intimate observation of the subjects. 80 stutterers, aged seven to forty-two years, served as subjects. 61 were male and 19 female. The adaptations and attitudes, especially in so far as they constituted emotional and social maladjustment, were found to be in many important respects the results of stuttering. "The stutterer does not react, in any important way, to stuttering as such. He reacts to stuttering in its relationships as he perceives them; he reacts to stuttering as he defines it . . . Whenever the stutterer's situation-as-perceived changes, his attitudes and adaptations change accordingly." "Stutterers as a group represent relatively normal emotional and social adjustment. Their personality problems are not significantly more numerous but are somewhat more extreme than those of normal non-stutterers. Their problems tend to become more extreme with increasing age, as stuttering becomes a greater burden in the face of greater social and vocational responsibilities." The personality problems of stutterers, more so than those of normal non-stutterers and less so than those of psychoneurotics, are featured by shyness, anxiety, depression and nervous instability.—*B. Wellman* (Iowa).

4480. Kleist, F. *Der Ermutigungsgedanke im preussischen Strafvollzug.* (The idea of encourage-

ment in the Prussian penal system.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 40-50.—An introduction in the form of a survey and appraisal of the present penal system, followed by a discussion of the psychological basis for the rehabilitation of criminals. This work is educational and should be in charge of adequately trained experts. Separation of criminals into classes based on the nature of their crime and their sentence is futile and absurd. Kleist urges instead that three progressive colonies be organized—"entering," "advanced," and "retiring." Vocational training and degree of socialization are to be the criteria for the classification of the convicts. The personal influence and the attitudes of adequately trained officials will be of greater effect than any systems involving moral appeals, self-determination, etc. As the criminal is reorganized, so the public, courts, and police must also be educated to a constructive instead of a vindictive attitude.—*O. N. de Weerdt* (Beloit).

4481. Kraus, S. *Bedürfnis und Befriedigung. Eine Untersuchung über die Hintergrundmächte der Gesellschaft.* (Need and satisfaction. An investigation of the hidden forces of society.) Vienna: Springer, 1931. Pp. 109.—*R. R. Willoughby* (Clark).

4482. Kuchta, J. "Ksiazka zakazana." (The forbidden book.) *Muzeum*, 1931, 46, 154-163; 207-219; 276-308.—The work of Kelchner and Lau in Germany, and that of Odier in France, have thrown much light on "morbid curiosity." A questionnaire has brought over 100 replies from adults in three Polish cities on the evils arising from this situation. Harmful reading falls into (1) criminalistic—penny dreadfuls, (2) erotic and romantic, (3) informational as to human anatomy, (4) near-scientific, on atheism, socialism, etc. From the answers it seems that boys have a wider range of interest than girls, the latter tending more to the romantic type. As motives for reading are given (1) curiosity, (2) desire for experience (by proxy), (3) need for solution of vexing questions, (4) revolt against censorships.—(*Soc. Sci. Abst.* IV: 8493).

4483. Laudois, R. *De l'influence des altérations de la vue sur l'oeuvre des artistes.* (On the influence of alterations of vision on the work of artists.) Thèse de med. de Paris, 1931. Pp. 92.—The sense organs conduct images to the brain, which puts them to work. It has been thought that the intellectual product would differ according to the nature of these images, and it has been sought to find whether genius might be due to a fineness of a particular sense. The author, on the contrary, wished to examine the inverse idea and find whether defective vision could produce the originality of genius. A defect in vision may be advantageous in certain professions. The myope with good visual acuity perceives details better; he perceives red and yellow equally well. These qualities are found in painters and in myopic writers. A serious but gradual modification of vision may lead the painter to modify his style and to create a

new one, as was the case with Degas.—*Math. H. Piéron* (Sorbonne).

4484. Lazarsfeld, R. *Das Problem der Ambivalenz in der antiken Psychologie.* (The problem of ambivalence in ancient psychology.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 125-126.—A brief analysis of several passages on conflict of will from Augustine's *Confessions*.—*O. N. de Weerdt* (Beloit).

4485. Linder, F. E. *Measurement of the pitch extent of the vibrato on attack, release, and transition tones.* In *The Vibrato. Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1. Pp. 245-249.—A method was adopted for laboratory measurement of the extent of a pitch vibrato when it is present in tones whose general pitch level is rising or falling. The method involves the assumption that the pitch changes in a tone of gliding pitch may be resolved into two elements: the gross change in pitch, and the vibrato fluctuation.—*B. Wellman* (Iowa).

4486. Lippe, F. W., Prinz z. *Angewandte Rasseenseelenkunde.* (Applied racial psychology.) Leipzig: Klein, 1931. Pp. 312.—*R. R. Willoughby* (Clark).

4487. MacDonald, A. *Legislative anthropology as applied to Congress—being a chapter in the scientific study of modern civilized man.* *Cong. Record*, 1932, Seventy-second Congress, First Session. Pp. 6.—Legislative anthropology, according to the author, includes the legislative, political, sociological, psychological, and physical status of members of a legislature. We are concerned with the last three. Lineage, heredity, place and time of birth, profession, degree of education and standing on any appropriate psychological tests would be considered under the first two of these, while physical status would include fundamental anthropological measurements and the health of members. Significance and methods of measurement of brain weight, temple pressure measurements and their correlations with various factors, and tables showing the anthropological measurements of 89 members of Congress make up the greater part of the study.—*E. H. Kemp* (Clark).

4488. Marinesco, G., Sager, O., & Kreindler, A. *Bégaiement et réflexes conditionnels.* (Stuttering and conditioned reflexes.) *Rev. neur.*, 1932, 39, 474-477.—Language is formed as a result of a series of conditioned reflexes. The stutterer is a psychopath whose attention is fixated on his articulation; his emotion of anxiety inhibits in a discontinuous fashion his phono-respiratory system, and, if the attention directed upon his acts engenders his language troubles, it is because this attention produces in the cortex a second focus of excitation which prevents a maximal concentration in the motor center of language.—*Math. H. Piéron* (Sorbonne).

4489. Miller, R. S. *The pitch vibrato in artistic gliding intonations.* In *The Vibrato. Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1. Pp. 250-268.—From a study of one artist's rendition of the Bach-

Gounod *Ave Marie* the following conclusions were drawn: A vibrato was present in each of the gliding intonations studied. A vibrato was always present in the phonated time in the gliding intonations studied. The average pitch extent and average rate of the vibrato in gliding intonations did not differ significantly from the vibrato in sustained tones. The average variability of pitch extent and the average variability of rate were four times as great as in sustained intonation. In portamentos and in attacks there was a greater tendency for rate to be regular than for pitch extent to be average.—*B. Wellman* (Iowa).

4490. Mönkemöller, —. *Der Fall Hopp.* (The Hopp case.) *Arch. f. Krim.*, 1932, 90, 196-231.—A man was murdered on a train, then robbed. The corpse was thrown from the window. The murderer, arrested, admitted the killing, but maintained that it was not premeditated, but the result of intense excitement under peculiar circumstances which the writer gives in detail. The man was a kleptomaniac, and fully conscious of his tendency to steal. Investigation proved him to be an hereditary psychopath, with hysterical traits. At times during the trial he was clever, even brilliant. Attention and memory were good, although he claimed lapses in the latter. The author cites the case as particularly interesting in that it reveals the mind of a murderer of intelligence, who can form an opinion of his own regarding the motivation of his crime, and who is the victim of a criminal family background and hereditary predispositions. In conclusion the author discusses the effectiveness of capital punishment.—*J. L. Jervis* (Yale).

4491. Nissen, I. *Das psychologische Problem in Ibsens "Rosmersholm."* (The psychological problem in Ibsen's *Rosmersholm*.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 132-136.—Nissen holds that *Rosmersholm* is a sex adjustment drama (in the narrower sense) and that it also presents in relation to this the psychological problem of how a woman laboring under a marked masculine protest remains, in the process of winning a man, true to her self-assertive striving for recognition both as a woman and as a social human being.—*O. N. de Weerdt* (Beloit).

4492. Noïca, —. *Comment nous arrivons à comprendre la parole et ensuite à nous exprimer. Comment nous arrivons plus tard à comprendre l'écriture et à écrire.* (How we learn to understand the spoken word and then to express ourselves. How we learn later to understand writing and to write.) *J. de neur. et de psychiat.*, 1931, 31, 162-167.—Children learning to talk, read and write, as well as adults learning a foreign language, do so by dividing the complete word into its simpler parts. It is quite normal to ask, when an unfamiliar word is heard, to have it pronounced slowly or even spelled out in order to grasp its meaning. At the same time that we learn the words we learn their significance. The patient suffering from sensory aphasia has lost his associative memory as well as the ability to analyze

the words he hears or reads into their components of syllables or letters. The faculty of speech and writing has developed from imitation and with the help of our didactic methods.—*H. Sys* (New York).

4493. Offner, M. *Die seelischen Nöt des ostjüdischen Kindes.* (The psychic needs of the eastern Jewish child.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 136-146.—The oriental or orthodox Jews kept themselves socially isolated in racial units. Western or modern Jews lose themselves in their communities and take up the customs of the cultures about them. The adjustment problems of the latter, therefore, differ widely from those of the former. The consequent mutual antagonisms between them and their Gentile neighbors, based on failure to understand each other, form the basis for the well-recognized sense of inferiority of the orthodox Jews. This attitude is, however, just as strongly aroused because of the traditions of harsh repression exercised over the children in home and school. Jewish mothers tend to be especially severe, since rule over their children forms almost the only outlet for their thwarted self-assertion. The non-aggressive traits forced by foreign societies upon adults are thus strengthened in their children by the Jewish religious customs governing child training. These traits are naturally shyness, evasive deception, fearlessness, and physical cowardice.—*O. N. de Weerdt* (Beloit).

4494. Overholser, W. *Note on the Massachusetts statute providing for ascertaining the mental condition of persons coming before the courts of the Commonwealth.* *Bull. Mass. Dept. Ment. Dis.*, 1931, 15, 15-19.—*R. R. Willoughby* (Clark).

4495. Pierantoni, L. *Contributo allo studio anatopatologico del sordomutismo acquisito.* (Contribution to the anatomo-pathological study of acquired deaf-mutism.) *Valsalva*, 1929, 1-24.—*R. Calabresi* (Rome).

4496. Reger, S. N. *Historical survey of the string instrument vibrato.* In *The Vibrato. Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1. Pp. 289-304.—*B. Wellman* (Iowa).

4497. Reger, S. N. *The string instrument vibrato.* In *The Vibrato. Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1. Pp. 305-340.—The average artistic violin vibrato rate is approximately seven vibrato cycles per second. The cello rate is slower than the artistic violin vibrato rate. Rate is not appreciably affected by the attack or release of notes, duration of notes, tonal intensity, extent of the pitch fluctuation, or probably by emotional content of music. The average extent approximates a quarter note. Extent varies with tonal intensity. All violinists employ the vibrato on practically all stopped notes of sufficient duration to permit its execution. The average artistic violin vibrato rate is approximately half a vibrato cycle per second faster than the average artistic vocal vibrato rate. The average artistic vocal vibrato extent is over twice as great as the average artistic violin vibrato extent. The intensity vibrato in string

instruments is more prominent than the intensity vibrato of vocal artists.—*B. Wellman* (Iowa).

4498. Ricker, C. S. A study of 300 inmates of a state farm. *J. Juv. Res.*, 1932, 16, 102-124.—The study is concerned with 300 inmates of a state farm who were sentenced to the institution for two years largely on the basis of charges of vagrancy. Of the group 67% had been unskilled workmen, 60.7% were single, 68.0% tested subnormal mentally, 71.3% had grown up under unsatisfactory home conditions, 83.7% had been arrested more than once, and 42.7%, 5.6%, and 16.7%, had respectively fathers, mothers, and siblings who were alcoholics, feeble-minded, psychotic, or delinquent. Only 9.3% of the cases does it seem reasonable to hope can be successfully rehabilitated during the period of commitment to the farm. The bulk of the habits and attitudes leading to vagrancy seem to have had their inception in the early life of the individuals—i.e., in poor home training and undesirable associates. It is believed that defective motivation and social maladjustment rather than mental lacks have caused most of the difficulties of the group.—*H. L. Koch* (Chicago).

4499. Rosenthal, H. Die Musikalität der Juden. (The musical ability and interest of the Jew.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 122-131.—Musical talent of the Jews as composers, directors, virtuosos, and critics is analyzed as a compensation for organ inferiority. The basis for it is inherited in the form of a racial tendency toward defective hearing. Support for this is found in the fact that in Jewish prophecy appeals to hearing and its imagery are made more frequently than in any other literature. Proof for the correctness of this explanation is presented in the form of generalizations from general observations that there is a tendency for musical ability to be present in families showing a prevalence of deafness. Exact statistics and consideration of directive social influences are lacking.—*O. N. de Weerdt* (Beloit).

4500. Rothschild, D. A. The timbre vibrato. In *The Vibrato*. *Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1. Pp. 236-244.—A study in timbre analysis was carried on by producing an oscillogram of the sound wave and reducing this wave to its component parts by means of harmonic analysis. Within the duration of the vibrato cycle, the wave changes form radically, going through a cycle of forms and returning to the original shape. There appears to be a periodic change in timbre with a change in pitch in the vibrato. The results from harmonic analysis adhered closely to those obtained through direct inspection. The closeness with which the results follow the resonance theory is striking.—*B. Wellman* (Iowa).

4501. Ruggles, E. W. An analytical study of various factors relating to juvenile crime. *J. Juv. Res.*, 1932, 16, 125-132.—The investigation concerns the question of the intelligence, mechanical ability, and early home training of 103 white boys, 16 to 22 years of age, who had been sentenced to the Camp

Polk Prison Farm in North Carolina. The subjects were given the Minnesota Paper Board Tests, Series A and B (to test for mechanical ability) and the Dearborn Group Intelligence Tests, Series I, Examinations A and B, and Series II, Examinations C and D. The data on family history were obtained from questionnaires filled out by responsible citizens who knew the delinquents. It is concluded: (1) that the group of boys studied was much below the average in intelligence and mechanical ability; (2) that crimes which required mechanical ability to commit were carried out by the boys ranking highest on the mechanical ability test; (3) that the baser sex crimes were perpetrated by the feeble-minded; and (4) that broken and unhappy homes seemed to be closely associated with the criminal behavior of the group.—*H. L. Koch* (Chicago).

4502. Schwarz, A. Graphologie der Zahl. (Graphology of numbers.) *Indus. Psychotechn.*, 1932, 9, 124-128.—As a result of an extensive study of the characteristics of the number writing of statisticians and bookkeepers, the author maintains that one can determine from the way digits and numbers are written whether a person has the necessary qualifications for these vocations. The most important writing characteristics necessary for simple tabulation work are quick and careful writing and ability to make straight columns in such a way that the numbers are distinct and separate. Simplification of the digits should be avoided, and corrections must be made by erasing and not by writing one figure over another.—*C. Burri* (Chicago).

4503. Seashore, C. E. Introduction. In *The Vibrato*. *Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1. Pp. 7-13.—This is an introduction to Volume I of a new series of *Studies in the Psychology of Music*. The volume is a digest of the experimental studies made to date in the University of Iowa on the subject of the vibrato in music. It is pointed out that the subject of the vibrato "is somewhat unique in the literature of psychology of music in that, although it is one of the most fascinating and profitable psychological approaches to the study of expression of emotion, the field had remained practically untouched by experiment until the problem was taken up in our laboratory." The work has two aspects, the psychological and the musical. The volume, according to the introduction, "deals in firm and bold strokes with musical history, theory, practice, pedagogy, and criticism in that it clears up the historical controversies as to what the vibrato is and should be by laying down objective and verifiable definitions, analyses and principles. It lays a scientific foundation for esthetic theory in regard to this element of beauty in music, makes available exact measures in current practice, develops esthetic norms, and furnishes the means of remedial and artistic training in the art of control of the vibrato.—*B. Wellman* (Iowa).

4504. Seashore, H. G. The hearing of the pitch and intensity in vibrato. In *The Vibrato*. *Univ.*

Iowa Stud.: Stud. Psychol. Music, 1932, 1. Pp. 213-235.—This research set out to determine objectively how a listener perceives the periodic changes in pitch and intensity in pitch and intensity vibratos. A synthetic tone producer was utilized. The subjects were submitted to tests to determine to what degree they heard the fluctuation of pitch and intensity in the vibrato tones. The listeners did not hear the actual physical changing of pitch and intensity, but only a fractional part thereof—one-fourth to one-half. There were wide individual differences in the ability of observers to detect differences in pulsation in the pitch vibrato.—B. Wellman (Iowa).

4505. Spielmeyer, —. Das Gehirn des Massenmörder Peter Kürten. (The brain of the murderer Peter Kürten.) *Arch. f. Krim.*, 1932, 90, 252-253.—The brain of the murderer Peter Kürten was sent to Munich for examination. The tests showed normal conditions in every portion of the brain. It did not differ in cell grouping from the average brain of a healthy person. There was no evidence of disease, nor the slightest suspicion of any anatomical disturbance which might have suggested an inherited or acquired disease.—J. L. Jervis (Yale).

4506. Swetlow, G. I. Anti-social behavior and the McNaughton rule. *Med. Times & Long Island Med. J.*, 1932, 60, 112-122.—R. R. Willoughby (Clark).

4507. Tiffin, J. The rôle of pitch and intensity in the vocal vibrato of students and artists. In *The Vibrato. Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1. Pp. 134-165.—Objective records of the pitch and intensity fluctuations in the voices of ten artists and ten vocal students were secured by means of a phono-photographic apparatus. The pitch vibrato was present approximately 95% of the phonated time in the singing voice of both the accepted artists and the advanced vocal students. The average extent of the pitch vibrato in the tones was .60 of a musical step. The average rate was 6.5 vibrato pulsations. In the fundamental characteristics of the pitch vibrato and of the intensity vibrato, no significant differences between the students and the artists could be found. It is probably the fluctuation of pitch, not intensity, which is most significant in producing the vibrato effect in the normal singing voice.—B. Wellman (Iowa).

4508. Tiffin, J., & Seashore, H. Summary of the established facts in experimental studies on the vibrato up to 1932. In *The Vibrato. Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1. Pp. 344-382.—The experimental studies on the vibrato conducted at the University of Iowa during the last twelve years are summarized topically.—B. Wellman (Iowa).

4509. Vogt, W. Zur Frage des Trainings. (The problem of training.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 146-151.—Vogt, in an analysis of the circumstances surrounding the development of a talent for sketching, stresses the arousal of effective motivation, of self-will and determination, as equally essential with instruction in technique to insure that

the extraordinary amount of requisite time will be spent in the necessary practice. The subject's visual perceptions develop and he sees everything analytically in terms of lights and shadows and perspective. He tends to visualize all episodes called to his attention. His interests lead him into contacts with artists, would-be and real, and he tends to take up their habits of dress and speech. These factors all combine to make him a different personality from what he would have been had he taken up commercial art or a trade. These problems of motivation have been analyzed and stressed by Berthold Otto, and successfully taken into account in his theory and practice of education and training of children in home and school.—O. N. de Weerdt (Beloit).

4510. Wagner, A. H. Remedial and artistic development of the vibrato. In *The Vibrato. Univ. Iowa Stud.: Stud. Psychol. Music*, 1932, 1. Pp. 166-212.—Most singers with naturally fine voices associate vibrato with good tone and acquire it by either conscious or unconscious imitation without having to be taught. Not all vibratos, even in the tones of our most celebrated singers, are equally pleasing to the ear. By comparison of phonophotograms of tones with the originals heard on the phonograph records the desirable and undesirable aspects of vibrato become evident in terms of rate, extent, and regularity of vibrato oscillation. It was found that so-called "diaphragmatically controlled" vibratos could be refined as to rate and regularity by "harnessing" them to rhythm. Fast vibratos of the throat-controlled, fluttering type could be made slower by developing a firm open throat and shifting the control of the vibrato to the larger respiratory muscles in the region of the diaphragm. Changes and refinements in extent of vibrato oscillation could be effected by focussing attention upon control of the abdominal muscles used in expiration.—B. Wellman (Iowa).

4511. Zilahi-Beke, A. Zusammenhänge zwischen Kunst- und Charakterentwicklung. (Relationships between the artistic growth and the personality development of an individual.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 51-60.—Fundamental behavior tendencies and social attitudes (*Lebensstil*) acquired by Michelangelo through formative circumstances in his childhood were basic in the development and expressions of his art. Deprived of his mother at six and reared with exceptional paternal brutality, he grew up without any softening feminine influences into a particularly rough-spoken, harshly antagonistic man. His equally well-recognized jealousy and uncooperativeness were the results of attitudes engendered by the older and stronger brother (M. was second), who held the favored position of the first-born. These and other influences led the artist to many of his deviations from tradition in his productions. Thus, the Virgin Mary is represented in the Pieta group as a younger and strikingly more beautiful figure than the Christ. Michelangelo had known no appealing maternal figures in his own life. His youth David he created as a gigantic figure, 27 feet tall, expressive of the protest of the younger brother that

he is fully capable of achieving what he sets out to do even against recognized giants (older brothers). The Sistine Chapel fresco shows God arousing life in Adam by touching him with his finger, instead of breathing the breath of life into him, as in Genesis. It is the creative artist and sculptor speaking, for whom God works with his hands as he himself works. These productions are all fearlessly expressive of the theory of the divine in human artistic creations. In a similar manner M.'s architectural achievements are also analyzed.—*O. N. de Weerdt* (Beloit).

[See also abstracts 4201, 4214, 4248, 4397, 4524, 4536, 4540, 4549, 4557, 4562, 4572.]

INDUSTRIAL AND PERSONNEL PROBLEMS

4512. Albertini, C. *La lotta contro i rumori ei rumori della strada.* (The struggle against noise and street noise.) *Vita ital.*, 1931, (Nov.-Dec.).—*R. Calabresi* (Rome).

4513. Allen, C. R., & Tiemann, H. A. *Managing minds.* New York: Century, 1932. Pp. xiii + 286. \$2.50.—This book is a psychological work presented in an extremely practical form. The object is to introduce serviceable knowledge to all people engaged in the regulation of the human mind. Acknowledged facts, verified by personal experience, form its background. The advantageous employment of this information is the concern of the writers. Emphasis is placed on the importance of the use of the conference procedure for the solution of difficulties. This method, as suggested, involves phases of thought, action and observation. The value of the conference method is indicated by a table stating the purpose and devices employed.—*H. Carroll* (Worcester, Mass.).

4514. Barker, S. G. *The Fechner-Weber law in wool sorting.* *Nature*, 1930, 126, 646.—This study was reported by the director of research service in the English wool industries. When wool fibers were classified into regularly spaced groups according to their fineness (determined tactually and visually), a geometric progression was found, conformable to the Fechner-Weber law. This same progression was found in a series of standards established in France, Germany, and Italy.—*A. B. Hunter* (Clark).

4515. Burgess, H. C. *Personality and accidents.* *Rehab. Rev.*, 1932, 6, 85-96.—*R. R. Willoughby* (Clark).

4516. Cobliner, M. *Das Berufsbild des Konstruktors.* (Vocational characteristics of engineers.) *Indus. Psychotechn.*, 1932, 9, 113-117.—According to Cobliner the necessary aptitudes and abilities for mechanical and electrical engineering are: superior intelligence, ability to draw, keen attention, good memory for forms and configurations as well as space objects, ability in observation, judgment, and critical evaluation. In order to qualify for these vocations one must have knowledge of the methods of mechanical or electrical construction, of the materials, their cost, quality, and general advantages and disadvan-

tages; one must also be trained in mechanical drawing, mathematics, mechanics, physics, chemistry, technology, electro-technics, thermatology, and work organization.—*C. Burri* (Chicago).

4517. Forbes, T. W. *Measuring drivers' reactions.* *Person. J.*, 1932, 11, 111-119.—Two methods were employed for testing the ability of automobile drivers experimentally. The first used a fairly elaborate apparatus which presented in miniature in the laboratory the conditions of driving through traffic, while the second involved judgments of speed on a strip of road. 31 commercial drivers and 50 university students were tested. With the former, the apparatus differentiated drivers with good accident records from those with poor records, while the road test showed many errors in estimation of speed large enough to be of importance. The apparatus preserves an actual driving situation in the laboratory. The results indicate that by increasing its complexity, the value of the test could be enhanced, thus adapting it for the purposes of selecting drivers, and, perhaps, of diagnosing driving difficulties.—(Courtesy *Person. J.*).

4518. Hayes, E. G. *Selecting women for shop work.* *Person. J.*, 1932, 11, 69-85.—The Hawthorne Works of the Western Electric Company employs women in four general classes of shop work, involving varying degrees of speed in hand movements. In a series of preliminary investigations, two peg-board tests were found to have some relation to the job success of a group of experienced machine operators, a group of newly hired machine operators, and two groups of experienced bench hands. These tests, as well as age, schooling, previous experience and marital status, were then studied with reference to the learning progress of 1248 women hired for shop work. Test scores showed a consistent positive relation to success in learning each of the four general classes of work. Other items showed varying degrees of relation to learning success. Composite scores were worked out for each of the classes of work, weighting test scores and previous experience in proportion to their importance for forecasting progress in the occupation.—(Courtesy *Person. J.*).

4519. Lachmann, —. [Shock labor as a psychohygienic factor.] *Sovietskaya Psychoneurologia*, 1931, No. 2-3, 112-119.—In his introduction, the author characterizes various forms of this work, and, on the basis of his own observations, comes to conclusions such as the following: new socialistic forms of work bring to light and develop the inner powers of the personality, which are an inexhaustible source for the rise and development of work productivity and accomplishment.—*A. Yarmolenko* (Leningrad).

4520. Matt, H. *Reaktionen unter Aufmerksamkeitsbelastung.* (The influence of the load of attention on the speed of reactions.) *Indus. Psychotechn.*, 1932, 9, 104-112.—A study of the influence of disturbances on the speed of reacting in connection with handling an automobile is reported in this article. The reaction situation consisted in performing

some typical driving movement, such as pressing the foot-lever of a test car, to the flashing of a red light or a combination of lights. After 20 subjects had been trained to perform this reaction until the reaction times remained relatively constant, various kinds of disturbing stimuli were applied at different intervals. These disturbances consisted of two kinds: meaningful ones, or things which fitted into the situation, and nonsense ones, which were entirely disconnected from the reaction situations. The following are some examples of the means which were used to disturb the subjects: a sounding horn at the front, back, or side of the driver, counting a series of lights, performing simple arithmetic, conversing with some other person. Without disturbances, the average simple reaction time was 276σ ; with interpolation of a sounding horn, the reaction time increased on an average 38% when the subject was not required to locate the sound. When localization was required, the increase in reaction time was 81%. Reacting when the driver had to count a series of lamps caused the reaction time to increase 76%, and when he had to perform simple addition problems it was raised by 104%. For complex reaction times, or when the subject had to react in a certain definite order, the average undisturbed reaction time was 880σ ; with interference by the sound of a horn an increase of 36% occurred, while talking to the driver lengthened the reaction time only 28%. If several of the interfering stimuli were applied in combination, the length of the reaction time was proportional to the complexity of the disturbing situation.—*C. Burri* (Chicago).

4521. Midulla, C. L'assicurazione infortuni per gli iscritti all'Opera Nazionale Balilla. Suo valore educativo e per la prevenzione della invalidità. (Insurance against accidents, written by the Opera Nazionale Balilla. Its educative value and its value for the prevention of sickness.) *Atti Uff. del I Conv. Naz. Med. O. N. B.*, 1930, 8, 1-18.—A report on this organization, which has made it possible to insure against accidents all children registered with the Opera Nazionale Balilla for a very low fee, and to evaluate justly the demands for payment, at the same time determining the causes and conditions of the accident. The prevention of sickness is based on propaganda and on immediate assistance; the propaganda is accomplished by the diffusion of knowledge relative to the functional and anatomical alterations which can follow the accidents, and to the dangers of irregular and awkward movements in play and at work, etc. The author separates the causes of accidents which are ascribable to the individual from those ascribable to the environment, and examines the frequency of the different categories of accidents according to ages.—*R. Calabresi* (Rome).

4522. Midulla, C. L'Opera Nazionale Balilla nella prevenzione degli infortuni e nella propaganda dei primi soccorsi in caso di infortunio. (L'Opera Nazionale Balilla for the prevention of accidents and for propaganda concerning first aid in the case of accidents.) *Echi e commenti*, 1929, (Oct.). Pp. 10.

—The Opera Nazionale Balilla has effected what was hoped for at the international labor conference at Geneva for the education of children and the prevention of accidents. The principle was adopted that accidents, as a grave social evil, must be prevented; together with the principle that injuries must be treated immediately to minimize serious consequences, with consequent reduction of working capacity. The Opera Nazionale Balilla also initiated the study of the causes of accidents, and established the distinction between accidents resulting from the surroundings and those due to the individual.—*R. Calabresi* (Rome).

4523. Yuravlev, I. N., & Vorobiev, A. M. [Results of physiological tests for pilots.] *Ukrain. psikhonevrol. instit.*, 1930, 11, 99-109.—The authors proposed to study changes in the physiological condition of pilots under the influence of a single flight, and in professional flying. The muscles and breathing underwent no remarkable changes, but there were steady increases in blood circulation and pulse. The reactions of the nervous system increased after flying. The sense organs showed a decrease of hearing and an increase in the space-stimulus reaction.—*A. Yamolenko* (Leningrad).

[See also abstracts 4311, 4360, 4363, 4487, 4535, 4575.]

CHILDHOOD AND ADOLESCENCE

4524. Adelmann, J. Das Eigenrecht des Kindes und die menschliche Gemeinschaft. (The birthright of the child and human society.) *Langensalza: Beyer*, 1931. Pp. 78.—*R. R. Willoughby* (Clark).

4525. Arlitt, A. H. Some phases of the program in parent education of the National Congress of Parents and Teachers. In *Toward Understanding Children II. Univ. Iowa Extension Bull.*, 1932, No. 283. Pp. 69-73.—Parent education in the United States is more conspicuous for the variety of its programs than for the development of any set program which is widespread in its influence and adopted in many communities. The Congress is interested throughout all of its branches in the promotion of three things: a sound knowledge of child development and parent-child relations on the part of all of its members, well organized and efficiently managed homes, and sound home and school relations based on mutual understanding. Cooperation between home and school is essential.—*B. Wellman* (Iowa).

4526. Atzeni Tedesco, P. La funzione circolatoria in rapporto all'habitus durante l'accrescimento dai 12 ai 19 anni. (The circulatory function in relation to body form during growth from 12 to 19 years.) *Atti della Soc. fra i cultori della sci. med. e nat. in Cagliari*, 1931, 4, 1-10.—The number of pulse beats in young people of 12 to 19 years grows less with age, while the value of the pressure increases. It was not observed what was the particular behavior in the number of pulsations in relation to the morphological types; however, the values of the car-

dio-vascular pressure for the ages of 12 to 16 years were higher in those of the asthenic type, lower in those of the pyknic type, and average for those of the athletic type. From 17 to 19 years, on the other hand, the values are higher for those of the pyknic type.—*R. Calabresi* (Rome).

4527. Atzeni Tedesco, P. La capacità vitale del giovane cagliaritano dai 12 ai 19 anni. (The vital capacity of young people of Cagliari between the ages of 12 and 19 years.) *Atti della Soc. fra i cultori delle sci. med. e nat. in Cagliari*, 1931, 4, 1-12.—The studies of the author show that the factors most frequently correlated with vital capacity are age and constitutional type. The fact that certain measures of vital capacity are higher with growth and in asthenies is explained by the facts of the form of the thorax and the action of the diaphragm. Height is an important factor in vital capacity.—*R. Calabresi* (Rome).

4528. Atzeni Tedesco, P. Le costituzioni morfologiche dei cagliaritani durante l'accrescimento dai 12 ai 19 anni. (The morphological constitutions of the young people of Cagliari during growth from 12 to 19 years of age.) *Atti della Soc. fra i cultori delle sci. med. e nat. in Cagliari*, 1931, 4, 187-218.—*R. Calabresi* (Rome).

4529. Atzeni Tedesco, P. Gli indici di costituzione e di robustezza nei cagliaritani dai 12 ai 19 anni. (The indices of constitution and strength in Cagliari youth of 12 to 19 years.) *Atti della Soc. fra i cultori delle sci. med. e nat. in Cagliari*, 1931, 5, 223-259.—*R. Calabresi* (Rome).

4530. Bader, H. Der Lebensstil des Kindes in Erzählung, Traum und Spiel. (The life pattern of the child as revealed in his own stories, dreams, and play.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 224-230.—Original essays, dreams and observed play forms are reported for twelve cases ranging in age from three and one-half to thirteen years. The interpretations are based on the assumption of biological or sub-conscious thinking and premature anticipation of future possible developments.—*O. N. de Weerdt* (Beloit).

4531. Blatz, W. E. The significance of early environmental factors in personality development. In *Toward Understanding Children II*. *Univ. Iowa Extension Bull.*, No. 283, 1932. Pp. 49-55.—Nobody has yet given us a comprehensive picture of the ideal child. Until we have definite standards we cannot make intelligent attempts to modify heredity. No matter what you are, you can always be changed by environmental conditions. All the trends of personality evolve from the fundamental factor called learning. Personality of individuals is built up through the habit of learning. Fairly early we lay down a basis of learning.—*B. Wellman* (Iowa).

4532. Blatz, W. E. Mental hygiene for the teacher and parent. In *Toward Understanding Children II*. *Univ. Iowa Extension Bull.*, 1932, No. 283. Pp. 105-110.—Persons can be placed some-

where on a linear scale that extends between the two extremes of possession and emancipation. Other terms synonymous with these are security and adventure. Such a measuring stick can be applied to persons, things and ideas. The individual can place himself somewhere along the scale in these three respects. Relationships that are important with reference to persons are those between husband and wife, parent and child, and employer and employee. In the realm of things, at one end of the scale is timidity and at the other communism. The realm of ideas is divided into the realm of morals and the realm of religion. The criteria at the end of the scale are intolerance and agnosticism and radicalism.—*B. Wellman* (Iowa).

4533. Burgess, E. W. Implications for parents of the White House Conference on Child Health and Protection. In *Toward Understanding Children II*. *Univ. Iowa Extension Bull.*, No. 283, 1932. Pp. 30-48.—This conference, the third to be called in this country, introduced the consideration of the importance of the rôle of the family in child health and protection. One of the greatest contributions of the conference was the emphasis upon the personality of the child and the home as a human environment for his development. "The good home is not to be measured, then, in terms of economic status, neatness, parental status, parental control as one scale of home conditions provides. Rather it is to be measured in terms of human responses." An extensive study of the function of home activities in the education of the child was undertaken. Schedules were obtained from over 8,000 school children, mostly twelve to sixteen years of age. The results were divided into those family relationships which seem to have a marked effect upon personality adjustment of children, those where the relationship is moderate, and those where there is a small positive relationship.—*B. Wellman* (Iowa).

4534. Chase, L. Motivation of young children: an experimental study of the influence of certain types of external incentives upon the performance of a task. *Univ. Iowa Stud.; Stud. Child Welfare*, 1932, 5, No. 3. Pp. 119.—The purpose of the investigation was to study the influence and relative effectiveness of the following kinds of incentives upon the performance of a task: control-motivation, success-repetition, success-praise, success-reward, failure-repetition, failure-reproof, failure-punishment. The subjects were 213 children from 27 to 96 months of age. They were divided into four groups, each group receiving three series of tests. Each time a subject was tested he was requested to perform two tasks, the motivation-dynamometer test devised by the investigator and a perforation test. Some motivation was more effective than the control-motivation for the performance of a task. "It is highly important for effective performance that a subject be given at least visual knowledge of progress and results of his performance, together with an aim or goal to work toward." Reproof and punishment as given in this study were equally effective. The methods of fail-

ure-repetition, failure-reproof and failure-punishment all yielded higher scores than the method of control-motivation. "It seems highly probable that failure-repetition, failure-reproof, and failure-punishment are more effective for performance than are success-repetition, success-praise, and success-reward. However, these results on Series III may have been influenced by at least two factors: (1) greater interest in the train system than in the water system, or (2) having had a previous success with the same experimenter. Until these two factors have been investigated it is possible to conclude only that if a child has had a previous success with an experimenter and returned one week later to perform a different task in which he might be interested to a greater extent than in the previous one, he will tend to expend a greater amount of energy under failure than he did under success."—B. Wellman (Iowa).

4535. Cooper, O. A. Psychological hazards of the adolescent in industry. *Bull. Mass. Dept. Ment. Dis.*, 1931, 15, 10-14.—R. R. Willoughby (Clark).

4536. Dickson, V. E. Behavior difficulties that baffle teachers. *J. Juv. Res.*, 1932, 16, 93-101.—The writer selected at random from each of 284 elementary school classes one boy and one girl whose behavior was to be observed for one semester for such difficulty patterns as have been listed by Wickman. Most of the children were declared to show one behavior problem or another, 74% of the boys and 57% of the girls, for example, being reported for inattentiveness alone. Hence it is suggested that it is normal for children to present conduct problems. The teacher must be trained to expect these as well as to recognize the less obvious maladjustments which express themselves in fearfulness and reticence.—H. L. Koch (Chicago).

4537. Dohme, A. Variabilität des Blutdrucks bei psychisch verschiedenen konstituierten und geistig verschiedenen begabten Kindern. (Variability of blood pressure in mentally differentiated children and gifted children.) *Zsch. f. Psychol.*, 1931, 119, 384-395.—The blood pressure of various groups of children was measured before school in the morning, after a period of arithmetic, after recess, after a reading period, and at the close of the school day. The older children were found to have on the average higher blood pressure than the younger ones. The times of most strenuous mental work were accompanied by a heightened blood pressure. The blood pressure of the gifted and ambitious child was considerably higher than that of the average. In general, it might be said that all forms of atypical constitutions, both mental and physical, showed a marked deviation from the normal.—D. S. Oberlin (Bryn Mawr).

4538. Edson, N. W. Put yourself in the child's place. In *Toward Understanding Children II*. *Univ. Iowa Extension Bull.*, 1932, No. 283. Pp. 22-29.—There is no more important truism in education than the constant need of those training children to put themselves in the child's place. For education is not

merely a process of spreading information alluringly before the child; our educational task is not to fit him for future adult situations, but to guide him in meeting his own situations today and tomorrow and the day after. If adults are to understand the child, they must see life from the child's level. In no phase of education is the need to put one's self in the child's place more evident than in guidance of boy-girl conduct.—B. Wellman (Iowa).

4539. Eschbach, H. Die geschichtliche Entwicklung der Erforschung der Kinderfehler in der neuern Zeit. (The historical development of investigation of children's mistakes in recent times.) Munich: Schick, 1931. Pp. 134.—R. R. Willoughby (Clark).

4540. Finscher, H. Über jugendliche Brandstifter. (Youthful incendiaries.) Bonn: Verl. Studentenwohl, 1930. Pp. 75.—R. R. Willoughby (Clark).

4541. Fordyce, A. D. Difficult and defective children. *Arch. Dis. in Childhood*, 1932, 7, 89-96.—R. R. Willoughby (Clark).

4542. Froemming, A. H. Comparative group results in self-analysis of personal qualities. *J. Juv. Res.*, 1932, 16, 145-152.—Several thousand boys of elementary- and high-school age who are street traders in Milwaukee were asked to indicate in a check list those qualities the possession of which they thought would make them better workers and thinkers. A high degree of agreement was found between the opinions expressed by high-school and grade-school boys. Some of the practices which were advocated were: studying and reading more, attending lectures, using correct English, being calm and not worrying, attacking difficult tasks first, controlling one's temper, preventing work from being interrupted, showing initiative, spending time wisely, and being neat and accurate.—H. L. Koch (Chicago).

4543. Fursey, P. H. Developmental age. In *Toward Understanding Children II*. *Univ. Iowa Extension Bull.*, 1932, No. 283. Pp. 9-21.—Developmental age is a term proposed to express the type of maturity which shows itself in changing play preferences, changing choice of companionship, changing attitude towards adults, and in general what may be called a changing "maturity" of behavior. A scale composed of 196 paired items to measure developmental age was given to 953 boys, ages eight to eighteen. The scores were found to increase quite regularly from eight to twelve, and then more sharply from twelve to sixteen. Reliabilities at the various ages averaged .89. There was no relation between developmental age and mental age. There was a small positive relationship between developmental age and height and weight.—B. Wellman (Iowa).

4544. Fursey, P. H. The elementary-school child. In *Toward Understanding Children II*. *Univ. Iowa Extension Bull.*, 1932, No. 283. Pp. 56-68.—Attention is called to some of the outstanding changes in child behavior which appear during the elementary school period. It is pointed out that these differences exist not only among children of different

chronological ages but even among children of the same age. Children of different ages need different treatment from parents and teachers; and within the same age the developmentally retarded child needs encouragement where the developmentally accelerated child needs restraint. Insight into these differences is one of the secrets of success in managing children.—*B. Wellman* (Iowa).

4545. Fursey, P. H. Adolescence. In *Toward Understanding Children II*. Univ. Iowa Extension Bull., 1932, No. 283. Pp. 93-104.—In spite of the great importance of the period of adolescence, there has been an amazing lack of research on the psychology of the adolescent. This has been due in part to the lack of satisfactory techniques and in part to a lack of clarity in the definition of the term adolescence. Adolescence is characterized physically by rapid changes in size and in body form, by the appearance of pubic, axillary and (in the boy) labial hair, and by change in voice. The question as to whether there is also an adolescent acceleration in mental growth is difficult to answer because there are no absolute units of mental growth. Certain changes in personality traits are apparently associated with degree of maturity. There is some indication of a real relationship between physiological age and maturity of behavior.—*B. Wellman* (Iowa).

4546. Hagan, C. W. Behaviorism and its relation to the child and the dentist. *J. Amer. Dental Asso.*, 1932, 19, 884-888.—*R. R. Willoughby* (Clark).

4547. Mallory, E. W. Relation of children's speech disorders to social adjustment. *Trained Nurse & Hosp. Rev.*, 1932, 88, 38-42.—*R. R. Willoughby* (Clark).

4548. McElwee, E. W. Association in normal and sub-normal adolescents. *Amer. J. Psychiat.*, 1931, 11, 311-318.—The Kent-Rosanoff word association test was used to compare trends in 80 children, of both sexes, the majority of whom were 14 years old. Findings: there was a higher number of individual reactions in normal adolescents than in children under 16 taken as a group, suggesting thus "some emotional instability during adolescence"; a much greater number of individual reactions in the sub-normals than the normal adolescents was explained as (1) due to greater instability of emotions in the sub-normal, (2) based in the more accurate comparability of sub-normal adolescents to children under 10 than children under 16 generally.—*S. J. Beck* (Boston Psychopathic Hospital).

4549. Minard, R. D. Race attitudes of Iowa children. *Univ. Iowa Stud.: Stud. Character*, 1931, 4, No. 2. Pp. 101.—A test was constructed for the measurement of race attitudes and administered to 1,352 pupils in grades seven to twelve inclusive in five Iowa towns and cities. A norm was formulated from the consensus of opinion of a group of forty-five representatives of presumably the most competent authorities. The pupils' replies were evaluated on the basis of this norm. The race attitudes

were found to undergo reconstruction and development during the adolescent period, but they were fairly well defined in the seventh grade. The attitudes of the average high school pupil fell far below the attitudes of expert opinion. There were no sex differences except that there was a greater variability for boys. Intelligence was positively correlated with a desirable race attitude, but there were many variations in attitude among those of the same intelligence level. Desirable attitudes did not seem to be much related to socio-economic level, within the range of communities studied.—*B. Wellman* (Iowa).

4550. Mouchina, E. A. Socialny reacciou ditey shkolnogo vikou. (Social reactions of children of school age.) *Dityachy kollektiv*, Kharkov, 1931, 95-114.—An attempt has been made to measure the social attitudes of 2300 boys and girls ranging from 9 to 15 years of age. The results may briefly be summarized as follows: (1) a child responds with an aggressive reaction to a disapproved act on the part of a playfellow, but girls are less aggressive than boys; (2) the older the child, the less aggressive he is, but around the ages of 12 and 13 the growth of aggressiveness becomes marked; (3) companionship is more marked among groups living in children's homes than among children at day schools, and the sociability among Pioneers is greater than that among non-members; the sociability of girls is higher than that of boys; (4) factors which most influence the sociability of the child are: (a) children's groups, with their traditions and customs, (b) domestic life, (c) social environment and educational influences. The rôle played by natural factors in these investigations cannot yet be ascertained.—*A. S. Zaluzhny* (Kharkov).

4551. Myers, G. Mental hygiene among school children. *Western Hospital Rev.*, 1932, 19, 22-37.—*R. R. Willoughby* (Clark).

4552. Neill, A. S. Points of view on punishing. *2. Maternity & Child Welfare*, 1932, 16, 113-115.—*R. R. Willoughby* (Clark).

4553. Patry, F. L. A neuropsychiatric contribution to a suggested outline of examination of children during the neonatal, infancy and pre-school ages. *Med. Times & Long Island Med. J.*, 1932, 60, 72-74.—*R. R. Willoughby* (Clark).

4554. Pfaundler, M. v., & Schlossmann, A. [Eds.] Handbuch der Kinderheilkunde, Bds. 2, 3. (Handbook of pediatrics, Vols. 2, 3.) Berlin: Vogel, 1931. Pp. 854; 1006.—*R. R. Willoughby* (Clark).

4555. Pichon, E. Aperçu sur le développement moteur et psychique de l'enfant. (Observation on the motor and mental development of the child.) *Paris méd.*, 1932, 22, 38-44.—The motor functions of the medulla are fully developed at birth, but the cerebral hemispheres and particularly the cortex do not seem to acquire their functional importance until a very long time after birth. The clinical findings show that there is absolute independence between motor and intellectual disorders. The author pre-

sents in review the mental development, commencing with language. He says that the state of development of language is a large factor in the judgment of the intellectual development of a child. There are two plans in the organization of language: one that the author calls *locutory* because it is centered around the person who speaks; the other that the author calls *delocutory* because it is centered around that of which one speaks. These two plans do not develop simultaneously in the infant. The former develops first and the second does not appear until the appearance of the expression of relations between concepts—this at the age of about two years. It is then that the expression "I" appears as the representation of the subject speaking in relation to other representations of his thought. A good mental development consists in the addition of new elements to infantile mental possibilities, not in the loss of these possibilities, and at the time that the "I" is acquired the language already has its adult type. The author then treats the development of character from instincts and affectivity. Then he presents the ideas of Piaget on the development of judgment and reasoning. He indicates the advantages and inconveniences of the method of tests in the clinic and concludes by considering disorders of the endocrine glands which may be reflected in the mentality.—*Math. H. Piéron* (Sorbonne).

4556. Puig, F. *La genèse de la volonté chez l'enfant et la doctrine du Professeur Adler.* (The genesis of the will in infants and the doctrine of Professor Adler.) *Int. Zsch. f. Indiv.-psychol.*, 1931, 9, 138.—Imitation and impulsive negativism form the basis for the genesis of the will. The presence of the two reciprocally negating responses must be explained. This explanation is found in Adler's feeling of inferiority. The child imitates principally those older or stronger, in an effort to compensate for his own weakness, or, failing in achievement, the feeble defend themselves against force, orders, or teachings by inhibitions and refusals.—*O. N. de Weerdt* (Beloit).

4557. Reckless, W. C., & Smith, M. *Juvenile delinquency.* New York: McGraw-Hill, 1932. Pp. viii + 412. \$3.50.—The sources of delinquency are to be found in maladjustments, usually in early childhood. "The juvenile delinquent is not a type but is usually a normal child gone astray." A historical summary of the frequency and distribution of delinquency shows that, in so far as there exists a typical child offender, he is a city boy of about 16 years, of white parentage. But delinquency is not an attribute of any one age, sex, race, nationality or group. It is a social, not a biological fact. It has a definite relationship to economic situation, size of family, broken homes, parent-child relations, social status, neighborhood conditions, recreational facilities, education and occupation, truancy, and school maladjustment. In short, no single factor or group of factors adequately explains delinquency, but like other behavior it must be interpreted in terms of total personality. In the study of causation the mod-

ern procedure is to search for the particular factors which can be shown to have had an immediate bearing on the behavior difficulties in the individual case. The child's own story and the family interview contribute valuable information. Students of child sociology believe that unofficial handling of cases should be extended as far as possible. The extension of probation gives rise to greater need for child-guidance clinics, which, however, would profit by more emphasis upon the sociological rather than the psychiatric approach. Most of the preventive programs, such as Boy Scout work, do not go back to early childhood where delinquency is rooted. The different methods of treatment—in institutions, probation, foster homes, individual study—each effect some cures and fail in other instances, so that it is not possible on the basis of available information to determine which method is most efficacious.—*M. P. Montgomery* (Faribault, Minn.).

4558. Rietz, L. *Rhythmus und Reifung: ein sozialdynamisches Problem.* (Rhythm and development: a problem of social dynamics.) *Sociologus*, 1932, 8, 193-206.—The author reports concerning rhythm and motivation in an auxiliary special-school class (6 girls, 11 boys) controlled psychologically for 5 years. When the period of observation began the children averaged 8 years of age. After two years all work was done in common and varied within the confines of a set rhythm. "The center of interest changed on an average every 3 weeks, and concentrated on a perfectly contrary occupation." "Thus play-acting replaced arithmetic. The same occupation returned on an average twice a year. For instance, the periods of latency for arithmetic were 3-8 months. When its turn came again the children had added considerably to their knowledge in spite of the fact that it had not been practised in the interval. It had matured during the period of latency." "All new thoughts and inventions of a working period need several months to mature. Then the same occupation returns on a higher conscious plane with an enlarged horizon." "The psychic processes of maturing, which proceed invisibly, are outwardly recognizable by the occupational rhythm, which consists of a continuous change of the center of interest."—*J. R. Kantor* (Indiana).

4559. Rosenheim, F. *A report on the types of cases referred to the child guidance clinics of Central Islip State Hospital.* *Psychiat. Quar.*, 1932, 6, 444-456.—This report deals with some of the different classes of cases seen at the Central Islip child guidance clinics held in towns on Long Island and gives an idea of the material available and the nature of the therapy applied. As illustrations several case histories are presented.—*E. T. Burr* (Vocational Adjustment Bureau).

4560. Roubinovitch, —. *L'adolescence.* (Adolescence.) *Bull. Soc. fr. de péd.*, 1932, No. 43, 18-33.—What characterizes adolescence from the somatic point of view, as from the psychological point of view, is the effort of nature to make for itself a com-

pleted being, a definitive and complete personality; the organism lives in a more spontaneous way than does either a child or an adult, and it is this spontaneity which it is necessary to exploit in order to capture the confidence of the adolescent and to be able to direct his instincts while making the least possible appeal to constraint.—*Math. H. Piéron* (Sorbonne).

4561. Stoddard, G. D. *A crisis in parent education.* In *Toward Understanding Children II.* Univ. Iowa Extension Bull., 1932, No. 283. Pp. 74-92.—Four leading questions are raised: What is parent education? What is wrong with it? Is it worth saving? What can be done? The things which are wrong with the parent education movement are presented as a series of ten postulates. (1) The underlying needs of parents have not been carefully diagnosed. (2) The ability of various categories of parents to take on new learning has not been determined. (3) Content materials have not been evaluated with respect to reliability and validity, or importance. (4) Methods of teaching peculiarly adapted to adults have not been evaluated. (5) Factors of motivation have been universally neglected. (6) There has been little attempt to discover whether parents really learned anything in their groups, or to check up on changed practices in the home. Measurement of improvement in attitudes has not developed beyond the speculative stage. (7) Leaders in parent education have rarely been granted either a professional status or a truly superior lay status. (8) The movement, while holding out much to both parents, is essentially feminine. (9) The difficulty of getting people to think or to change long-established habits has been seriously under-estimated. (10) the fundamental relation of parent education to problems in economics, sociology, and political economy has not been given clear recognition. Parent education is consistent with what we know of human psychology and of human behavior. It is consistent with modern economics and with modern family life. It should lead to a better division of labor between husband and wife, parent and offspring, and the family and outside agencies.—*B. Wellman* (Iowa).

4562. Urbschat, F. *Das Seelenleben der kaufmännisch-tätigen Jugendlichen. Ein Beitrag zur Psychologie der berufstätigen Jugend.* (The mental life of commercially active children. A study of the psychology of the working youth.) Langensalza: Beltz, 1932. Pp. 80.—The author investigated 466 boys and girls in the trade schools of East Prussia and gives a psychologically written picture of their level of development, duration of fitness for work, behavior of the two sexes, etc.—*E. H. Kemp* (Clark).

4563. Velecika, N. P. *Socialny nastanovlenia ta povedinka ditey.* (Social attitudes and conduct of children.) *Dityachy kollektiv*, Kharkov, 1931, 115-134.—The authors have studied the social attitudes and behavior of children between the ages of 12 and 18. The results are as follows: (1) There is no correlation between the social attitudes and behavior of

children. (2) There is no correlation between the IQ and social attitudes. (3) The development of sociability of children begins with friendly relations between two children. Through the interrelation between children in one group, it goes on to interrelations between the individual child and children's groups, and so to the general social attitudes of adults.—*A. S. Zaluzhny* (Kharkov).

4564. Volobuev, P. *Socialny vsaemovidnosyny ou ditey doshchilnogo viky.* (Social interrelations of children of pre-school age.) *Dityachy kollektiv*, Kharkov, 1931, 80-94.—The author studied the behavior of 180 children's groups at play. His conclusions are as follows: There are three types of social behavior at this age; one in which the dominant feature is aggressiveness, one in which immediate social conduct prevails, and finally, one in which amicable group interaction and cooperation occur. There is greater aggressiveness in games than in work. A prevalence of immediate social contact is often found when the children's activities are definitely planned for them. The highest type of social interrelation is most often found in spontaneous groups when they number four to six members.—*A. S. Zaluzhny* (Kharkov).

4565. Zachry, C. B. *Personality adjustment of the superior child.* *J. Nat. Educ. Asso.*, 1932, 21, 89-90.—*R. R. Willoughby* (Clark).

4566. Zachry, C. B. *Adjustment of the concrete-minded child.* *J. Nat. Educ. Asso.*, 1932, 21, 121-122.—*R. R. Willoughby* (Clark).

4567. Zaluzhny, A. S. *Socialniste dityyny ta metody ii vivcheniya.* (Sociability in children and methods used in studying it.) *Dityachy kollektiv*, Kharkov, 1931, 65-81.—During the last five or six years in the Ukraine certain studies of the social attitudes of children have been set up. The results of these studies show that the social development of the child at different stages of his life is not the same. The elementary forms of the social attitude appear during the first two or three months, but at this stage the sociability of the child is directed only towards adults. The more complicated forms of social attitudes appear later, when the child enters upon relations with other children, and when children's groups appear. These groups reconstruct the social behavior of the child. From pre-school to school years the greatest authorities are the parents, but during the school years the greater part of the Ukrainian children, especially of the Pioneer group, transfer their loyalty from their parents to leaders of the revolution. During the school years consciousness of social status develops in the child mind. The attitude of comradeship also develops during this period, although the sense of social duty is less apparent; only 56% of the children between twelve and thirteen are consciously accomplishing their social duties in school. Two types of environment influence the development of the child. One is the unorganized influence of the parents and children's groups, the other is the organized influence of the school, the

Pioneer organization, etc. Sometimes these influences are contradictory, while at the other times they operate in the same direction.—A. S. Zaluzhny (Kharkov).

4568. Ziehen, T. *Das Seelenleben der Jugendlichen.* (4th ed.) (The psychic life of the adolescent.) Langensalza: Beyer, 1931. Pp. 175.—R. R. Willoughby (Clark).

[See also abstracts 4458, 4463, 4482, 4493, 4501, 4599.]

EDUCATIONAL PSYCHOLOGY

4569. [Anon.] *Pädagogisches Jahrbuch, Bd. 49.* (Pedagogical yearbook, Vol. 49.) Vienna: Verl. f. Jug. u. Volk, 1930. Pp. 208.—R. R. Willoughby (Clark).

4570. Banissoni, F. *Orientamento professionale di tempi lontani e conclusioni moderne.* (Vocational guidance in the past, and modern conclusions.) *Riv. di sci. appl. all'educ.*, 1932, 3, 85-95.—The author examines two old Italian treatises relative to vocational guidance: *Le professioni che posso scegliere ed a un ariare i giovan studenti*, by T. M. Cestari (Venice, 1871), and *Mentore, guida pratica per la scelta di una professione*, by G. Marcotti (Florence, 1893). In these books one finds that the needs which are now universally admitted were discussed: the need for rendering the schools less abstract and nearer to life; the need for preparing young people for the professions which they wished to enter; knowing the attitudes required in each profession, and inspiring the students who wished to enter these professions with the requisite attitudes. The second book foresees the possibilities which vocational guidance is now in the process of realizing.—R. Calabresi (Rome).

4571. Berger, F. *Körperbildung als Menschenbildung. Eine pädagogisch-psychologische Studie.* (Physical education as total education. A study in educational psychology.) Langensalza: Beyer, 1931. Pp. 92.—R. R. Willoughby (Clark).

4572. Brachfeld, O. *Zur Individualpsychologie des Sprachenerlernens.* (Individual-psychological considerations in learning foreign languages.) *Int. Zsch. f. Indiv.-psychol.*, 1932, 10, 201-207.—Individual differences in ability to master foreign languages are not based essentially on differences in a special capacity for languages or in general intelligence, least of all in a specific capacity for any given language. Progress in mastering a foreign language depends on motivating attitudes and self-confidence. Proof for this contention is found in the "turning point" said to be generally experienced by learners when they suddenly acquire a feeling of confidence and ability in the speaking use of the language studied. This same "turning point" or sudden spurt may be noticed in children learning to use their "native" tongue. Some individual cases corroborating the position taken are presented.—O. N. de Weerdt (Beloit).

4573. Douglas, H. R. *The contribution of statistical method to education.* *School & Soc.*, 1932, 35, 815-824.—H. L. Koch (Chicago).

4574. Dudycha, G. J. *The beliefs of college students concerning the athlete and the scholar.* *School & Soc.*, 1932, 36, 123-128.—755 freshmen and 296 seniors from 10 midwestern colleges and universities were requested to indicate their belief or lack of belief in 25 individual statements concerning frequently alleged characteristics, opportunities and privileges of college athletes. In both the freshman and senior groups there was no high incidence of the beliefs that the athlete deserves a more prominent place in college life than does the scholar, or that the former gains more from his college experiences, is more likely to succeed in life, or possesses by virtue of being an athlete any desirable qualities in unusual degree.—H. L. Koch (Chicago).

4575. Estabrooks, G. H. *A modern trend in college personnel work.* *Person. J.*, 1932, 11, 91-96.—College is now education for life in a democracy, not merely education of the intellect, but of the emotional and personal habits as well—the total personality. Through some scheme of individual contact students should be presented with a picture of those basic personality traits which are agreed upon as furthering success and happiness. This in no way involves standardization of personality or cramping of initiative. This education of emotional and habitual adjustments should be allotted ample time and should not be confined to informal non-required interviews or a brief course of lectures.—(Courtesy *Person. J.*).

4576. Förster, F. *Die Vorbereitung des Lehrers auf den Unterricht.* (The preparation of teachers for instruction.) Langensalza: Beyer, 1931. Pp. 18.—R. R. Willoughby (Clark).

4577. Gentile, G. *Scritti pedagogici. I. Educazione e scuola laica.* (Pedagogical writings. I. Education and the lay school.) Rome: Frecciani-Fumminetti, 1932. Pp. viii + 430.—The fourth edition has been revised in its content and augmented by a chapter on *The Defense of Pedagogy*, which reproduces the pedagogical essays already collected in 1908 under the title *Ecole et Philosophie* and republished in 1921 and 1927. In these chapters, 12 in all, the author reveals his own thinking as opposed to the pseudo-pedagogy of pedagogues without philosophy, and as opposed the pseudo-laity without faith and without judgment; and points out the necessity of arousing and developing the philosophical spirit in all the schools of culture and of humanity.—A. Benedetti (Rome).

4578. Giovanni, C. *Dottrine e opere nella storia dell'educazione; profeti, critici, costruttori, maestri.* (Teachings and works in the history of education; prophets, critics, builders, masters.) Lanciano: Carabba, 1932. Pp. viii + 562.—A collection of originally independent essays on many doctrines, thinkers, and teachers, brought together in order

that some notes, observations, and interpretive and critical analyses might be offered to all those who are interested in the history of education and culture. It is especially a reconstruction of modern educative thought through its chief representatives, and also through several minor collaborators in the progressive work of human education. This work is divided into three principal parts, in each of which are found the indicated essays: (1) thinkers and builders, comprising 12 essays on the *Emile*, on Schiller, Froebel, Pestalozzi, etc.; (2) masters and schools of our day, comprising 8 essays; and finally (3) a single long essay on each of the different subjects.—*A. Benedetti* (Rome).

4579. **Glover, H. F.** An application of the project procedure to swimming. *School & Soc.*, 1932, 35, 838-840.—*H. L. Koch* (Chicago).

4580. **Grifoni, G.** Cinema istruttivo e educativo. (Instructional and educational motion pictures.) *Riv. ped.*, 1932, 25, 1-9.—The problem of the value of motion pictures in the school has not been thoroughly examined up to the present time. Extreme theories hope to substitute the film for the book; however, everyone must recognize the usefulness of educational films, whose value lies in the subconscious preservation of images which have apparently been forgotten. However, with the customary speed of films, reflection, criticism, and sometimes attention, which stops casually on secondary details, are impossible. The motion picture must be excluded from literary education, because quite evidently poetic beauty is completely lost; it can be used partially for the teaching of history, although the ideal and poetic aspects of the events are not easily portrayed. However, motion pictures with sound can very practically be utilized in teaching foreign languages, with occasional periods for practice between teacher and pupil. In the teaching of the natural sciences and hygiene the utility of the cinema is certain. One must always remember that the cinema has great suggestive power, and take care that recreational films give children examples to follow which will improve their civil and moral educations.—*R. Calabresi* (Rome).

4581. **Herrmann, H.** Theorie und Praxis im Zeichenunterricht in einer höheren Schule nach der Lehre von Gustav Britsch. (Theory and practice in arithmetic instruction in a higher school, according to the doctrine of Gustav Britsch.) Düsseldorf: Schwann, 1931. Pp. 56.—*R. R. Willoughby* (Clark).

4582. **Jordan, M. L.** Cooperative education. *School & Soc.*, 1932, 36, 60-64.—A comparison is made between two groups of preparatory school students, the members of one of which carried regular positions during half of their junior and senior years while the members of the other suffered no break in their schooling. There was not much difference in the average age and intelligence of the two groups, though the latter tended to show itself to be possessed of the more superior home background as well as parents engaged in a higher type of occupation. In school marks as well as in performance on the Sones-

Harry High School Achievement Test and the Iowa Silent Reading Test the working students excelled. The latter also showed themselves to be interested in more worth-while ideas and things, according to the Association Interest Test. It is concluded that cooperative education aids learning and helps materially in the development of character.—*H. L. Koch* (Chicago).

4583. **Köhler, E., & Hamberg, I.** Zur Psychologie und Pädagogik der geistigen Aktivität. Entwicklungsgeschichte einer Klasse (1924-1930). (The psychology and pedagogy of mental activity. The developmental history of a class (1924-1930).) Berlin: Herbig, 1931. Pp. 63.—*R. R. Willoughby* (Clark).

4584. **Lithauer, D. B.** An experimental kindergarten for children of primary school age. *J. Juv. Res.*, 1932, 16, 153-160.—The author describes an experimental kindergarten for children of primary school age who from the point of view of mental development were not ready for normal school work. Some of the 73 subjects of the study had demonstrated their deficiencies by failing in the first grade. Most of the children did satisfactory work when they were sent to the public school. Their fitness for assuming the responsibilities which the public school is likely to place upon them was determined on the basis of their mental ages according to the Stanford-Binet test and the kindergarten teacher's judgment regarding their accomplishments.—*H. L. Koch* (Chicago).

4585. **Malsch, F.** Das Interesse der Schüler. (The interest of the pupil.) (3rd. ed.) Frankfurt: Diesterweg, 1931. Pp. 70.—*R. R. Willoughby* (Clark).

4586. **Mazzeo, A.** Per una scuola viva. (For a living school.) Turin: Paravia, 1931. Pp. 280.—This is a book dedicated to teachers. Many details about school life, didactic problems, general questions as to the arguments about and programs of instruction, and methods of education have been considered from a practical point of view.—*R. Calabresi* (Rome).

4587. **Monroe, W. S., & Streitz, R.** Directing learning in the elementary school. New York: Doubleday Doran, 1932. Pp. 480. \$2.50.—Knowledge is obtained by the pupil as a definite result of the pursuit of learning activities. The authors advocate a pupil-teacher relationship whereby the teacher serves in the capacity of leader. The method of learning exercises has become obsolete in the modern school. The teacher's function is to ascertain the pupil's objectives and to encourage him in their attainment. It is important that the teacher adapt his methods to the requisites of the individuals of the class. Part I of this text gives a survey of teaching techniques. Part II concentrates on the teaching of subjects in the elementary school. Lesson plans in various subjects and specific problems of teaching are

presented to the reader.—*H. Carroll* (Worcester, Mass.).

4588. Neumann, J. *Die Entwicklung zur sittlichen Persönlichkeit.* (The development toward moral personality.) Gütersloh: Bertelsmann, 1931. Pp. x + 455. RM. 15, 17.—This second volume of a psychology of religion series desires to clarify the goal and path of all education: the development toward moral personality. It attempts a survey of the standpoint and investigations based upon this theme, as well as a survey of various religions, confessions, and philosophical, psychological, and therapeutic tendencies. Part I of this volume considers the theme in the light "of Chinese philosophy" (W. Y. Ting, Frankfurt), "of the ethics of Buddhism" (I. W. Hauer, Tübingen), "of Judaism" (L. Baeck, Berlin), "of the early church" (G. Bertram, Giessen), "of Catholicism" (R. Allers, Wien), "of Russian Christianity" (N. V. Arsenius, Königsberg), "of oriental Christianity" (K. Beth, Wien), "of Calvinism" (P. Barth, Madiswil), "of Lutheranism" (A. Koberle, Basel), and in the spirit "of mysticism" (W. Lehmann, Borby-Eckenförde). In the presentation of the Chinese and Buddhistic philosophy there is an attempt to maintain a neutral standpoint; in the rest the interweaving of religion and ethics stands out. In the second part (Allers: *Biological Foundations and Limits*) the problem of mental development is discussed. Part III deals with the theme "according to the investigations of developmental psychology," surveying the test methods (H. Hetzer, Elbing), "according to the investigations of Gestalt theory, emphasizing the problem of feeling" (C. Schneider, Riga), "of structural psychology (in the manner of Dithay and Spranger)" (E. Stern, Giessen, Mainz), "of psychoanalysis," demanding a philosophical attitude (C. Müller-Braunschweig, Berlin), "of individual psychology," clarifying the psychology of values as well as the problems of theoretical values (J. Neumann, Giessen). In the fourth part, the synthesis contained in scientific and philosophic psychology is discussed "in the spirit of Kantian ethics," with reference to his psychology of religion and educational writings (A. Messner, Giessen), "in the spirit of ethical values," following Scheler, N. Hartman, Guardini, as well as the author's own questions (Springmeyer, Köln), "of the philosophy of Klages" (W. Hegar, Giessen), "of the personalistic philosophy of William Stern" (W. O. Doring, Lübeck).—*K. Lensburg* (Düsseldorf).

4589. Washburne, C. *Adjusting the school to the child.* Yonkers-on-Hudson: World Book, 1932. Pp. xvi + 189. \$1.68.—This book does not attempt to describe fully the Winnetka school system, but rather to select from the many techniques there developed those most likely to prove adaptable and valuable in general educational practice. The author describes in detail the individualization of the tool subjects by the development and use of specific standards of accomplishment, complete and diagnostic tests, self-instructive and self-corrective teaching material, as well as by the substitution of piece-work

for time-work. He emphasizes the need for the socialization of other subjects and of all those group and creative activities where variation is legitimate and desirable for the promotion of interest, mutual benefit, and group progress.—*E. A. Collamore* (Worcester, Mass.).

[See also abstracts 4347, 4360, 4451, 4509, 4536, 4566.]

BIOMETRY AND STATISTICS

4590. Cureton, E. E., & Dunlap, J. W. *C-D machine correlation chart.* New York: Macmillan, 1932. Pad of 24 charts; 4-page manual. \$1.00.—"Designed to facilitate the computation of the Pearson product-moment correlation coefficient and certain related functions with the aid of a calculating machine, such as the Marchant or Monroe. It is arranged to take advantage of many short-cuts with the machine; and it provides checks on all the important arithmetical work."—*R. R. Willoughby* (Clark).

4591. Elderton, E. M., & Woo, T. L. *On the normality or want of normality in the frequency distributions of cranial measurements.* *Biometrika*, 1932, 24, 45-54.—The distributions of measures of homologous skull bones are not normal, but typically skewed for each bone. The simpler the organ measured the less likely it is to show a normal distribution. It is suggested that measures which show a normal distribution must depend upon a large number of contributory causes.—*E. B. Greene* (Michigan).

4592. Georgescu, N. S. *Further contributions to the sampling problem.* *Biometrika*, 1932, 24, 65-107.—"Associated functions" of product-moments and semi-invariants are defined, and methods are formulated for applying these to the solution of various sampling problems.—*E. B. Greene* (Michigan).

4593. Jenkins, T. N. *A short method and tables for the calculation of the average and standard deviation of logarithmic distributions.* *Ann. Math. Statist.*, 1932, 3, 45-55.—A short method for computing the average and standard deviation of logarithmic distributions is described and illustrated with an example. Tables of $\log x$, $(\log x)^2$, and of a constant K (which depends on the size of the step interval) are given. The formulae used with the tables for getting the logarithmic average and standard deviation are derived in an appendix.—*A. K. Kurtz* (U. S. Civil Service Commission).

4594. McKay, A. T. *A Bessel function distribution.* *Biometrika*, 1932, 24, 39-44.—Tables are given and explained for a Bessel function distribution which may be used in fitting data which do not conform to a Pearson curve and which have betas below the Pearson Type III line.—*E. B. Greene* (Michigan).

4595. Pearson, K., & Pearson, M. V. *On the mean character and variance of a ranked individual,*

and on the mean variance of the intervals between ranked individuals. *Biometrika*, 1932, 24, 203-279.—The influence of skewness in parent distributions on the distribution of ranks is shown for a wide range of curves by means of formulae, tables, and illustrations, and the following principles are noted: (1) The correlation between adjacent rank variates is high, but between adjacent rank intervals it is low. (2) The partial correlation of any two rank variates or rank intervals for a constant variate or interval lying between them is zero. (3) The order of variabilities of rank intervals is much the same as the order of the intervals themselves. (4) Galton's ratio of 2 to 1 for the first and second rank intervals is approximately true for a large number of curves. (5) In samples from a curve of finite range the correlations of inter-rank intervals are negative, but from a curve of finite range, positive. (6) In curves where there is much mediocrity, the interval between the first and second ranks may be ten or more times the intervals between mediocre individuals. The intensive study of individuals in a sample in addition to the statistical constants of the sample is recommended.—*E. B. Greene* (Michigan).

4596. Pepper, J. The sampling distribution of the third moment coefficient. An experiment. *Biometrika*, 1932, 24, 53-64.—By means of an experimental sample it is shown that the distribution of $\sqrt{\beta_3}$ in samples from a normal population is more satisfactory than the third moment coefficient ν_3 . "It would appear desirable in practice to take the normal curve as representing the distribution of $\sqrt{\beta_3}$ in samples, failing the discovery of the actual curve."—*E. B. Greene* (Michigan).

[See also abstract 4605.]

MENTAL TESTS

4597. Brigham, C. C. A study of error. New York: College Entrance Examination Board, 1932. Pp. xiii + 384. \$5.00.—The body of the book (which is for the most part printed from photographed plates of typed pages) is a study of item validities and error distributions for the synonyms, logical inference, verbal and number sections of the College Entrance Examination Board Scholastic Aptitude Tests for several years. Preceding chapters consider the theories of meaning of Titchener, Dewey, Ogden and Richards, and Spearman; symbols and the factor theory; and the findings from a methodological study on the ability to match emotional expressions. Succeeding chapters present the Princeton 1925 test, now superseded, and several spatial relation tests. Appendices are included on administration and statistical methods, and the six annual reports of the committee are reprinted.—*R. R. Willoughby* (Clark).

4598. Camp, B. M. The clinical application of psychometric tests. *Psychiat. Quar.*, 1932, 6, 523-528.—The writer emphasizes the fact that many psychometric examiners are untrained, inexperienced

and confused, and that their work should be confined to collecting data and performing certain routine tasks. In dynamic clinical work the psychometrist is about as effective as the technician would be in the capacity of physician. Just as no physician would make his diagnosis on laboratory reports alone and no psychiatrist would base his conclusions solely on his patient's replies to questions, so no psychologist would be the slave of psychometric methods to the exclusion of general clinical material. These methods are laboratory aids to diagnosis, scientifically devised and objectively scored, but of real value only when interpreted in the light of the patient's heredity, developmental history, school achievement and medical history.—*E. T. Burr* (Vocational Adjustment Bureau).

4599. Cruchet, R. La mesure de l'intelligence chez l'enfant de la naissance à 2 et 3 ans. (The measurement of intelligence in the child from birth to 2 or 3 years of age.) *J. de med. de Bordeaux*, 1930, 107, 951-960.—The author says that in 1911 he published in *L'Année Psychologique* the application of Binet tests to children of less than two years of age, and reproduces his work. Simon, in a recent article in the *Paris Médical* of the November 1, 1930, has published a note concerning the scale as applied to all young children. This scale, the author explains, is manifestly erroneous and does not correspond at all to the temporal development of the intelligence of a normal infant.—*Math. H. Piéron* (Sorbonne).

4600. Fessard, A., & Piéron, H. La notion de validité. (The idea of validity.) *Année psychol.*, 1932, 31, 217-228.—A critical exposition of the present status of the concept of validity and a few practical suggestions for the benefit of those who are interested in the problem.—*E. H. Kemp* (Clark).

4601. Fessard, A., & Piéron, H. Du minimum de mesures nécessaires pour l'établissement d'un test dans un but psychométrique. (Concerning the number of measures necessary for the standardization of a test for a psychometric purpose.) *Année psychol.*, 1930, 31, 246-259.—The authors, after taking into account the various exigencies which might affect a choice, arrive at the conclusion that the minimum number of measures necessary may be fixed, roughly, at 25.—*E. H. Kemp* (Clark).

4602. Fryer, D. Validating measures of interest, with particular reference to group interest scales. *Person. J.*, 1932, 11, 103-110.—For validating scales designed to measure interests characteristic of a group, five methods are compared: (1) validation with control samples; (2) validation in selection of the samples; (3) validation by indicating group differences in interests; (4) validation with extraneous criteria; (5) validation through use. Results of the theoretical validation of such interest scales are summarized.—(Courtesy *Person. J.*).

4603. Höfinghoff, H. Untersuchungen über die Brauchbarkeit des Descoedres'schen Tests für die Beurteilung der cerebralen Entwicklung des Spiel-

kindes. (Investigations on the usefulness of the Descoeuilles tests for the estimation of cerebral development in children.) Charlottenburg: Hoffmann, 1931. Pp. 41.—*R. R. Willoughby* (Clark).

4604. Segers, J. E. *Essai d'application du test B-D collectif.* (Application of the B-D group test.) *J. de neur. & psychiat.*, 1931, 31, 168-174.—The B-D group test, thus called after its authors Buyse and Decroly, is at present the most popular test in Brussels schools for children between the ages of 3 and 7. It is an adaptation of the Binet-Simon scale and was first used on 156 boys and 165 girls between the ages of 6 and 7. The author applied the test to 38 boys of about 6, and presents the results in detail. He finds that the mental age determined by the B-D is in almost all instances lower than that obtained by the Binet-Simon. This test is applicable to very small children, but it is necessary to apply it to a large number of children between 3 and 8 in order to arrive at reliable averages.—*H. Sys* (New York).

4605. Tryon, R. C. Multiple factors versus two factors as determiners of abilities. *Psychol. Rev.*, 1932, 39, 324-351.—The evidence on which the two-factor and multiple-factor theories are based is considered. The author holds, with Thompson, that "the

fact of the mean value of tetrads being zero in any correlational problem serves no more to support the two-factor theory than any multiple-factor theory." The difference is that on the two-factor theory *all* tetrad differences are *exactly* zero, while on the multiple-factor theory zero is the most probable value, the actual theoretical value being distributed about zero. Thompson and MacKie have shown that "the more factors there are at work the smaller the dispersion of the tetrads around zero. Since researches based on a small number of subjects cannot settle the question, because of the sampling error, the author admits in evidence only ten crucial studies, involving over 100 subjects. Examining these at length, he concludes that not one shows a distribution of observed tetrads which one would expect if only two factors were operative, since the tetrads actually dispersed about zero. He suggests rejecting the two-factor theory and choosing a multiple-factor theory most consistent with existing psychological findings."—*A. G. Bills* (Chicago).

4606. Zachry, C. B. Interpretation of "intelligence" tests. *J. Nat. Educ. Asso.*, 1932, 21, 149-150.—*R. R. Willoughby* (Clark).

[See also abstracts 4358, 4364.]

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